Construction and Rehabilitation of Roads and Storm Water Drainage System in Mwanza

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Summary

This paper after introducing the project and the country in which the project is being implemented, discusses how planning, design and execution of the project was conducted. Then it will look into different recommendations drawn as part of the project objectives and what measures have been taken. The paper tries to focus on the project implementation plan (PIP), prepared by both the Prime Ministers Office (PMU) and the Project Implementation and Co-ordination Unit (PICU) and looks into how various activities were conducted and the specific conditions attached to implementers of those activities. It shows the role of different actors throughout the project circle and their interrelations during implementation. It will be shown how different criteria were used for financial allocations amongst the participating agencies-municipal councils, and their responsibilities vis a vis further funding possibilities. Then the paper discusses in length the production stage, which is still going on, and tries to compare the experiences gained by the author to the Swedish contracting and building procedures.

At the end, with the author's personal understanding of the project the paper will highlight achievements reached so far in the project circle i.e. from conception to implementation including different organisational structures. At various cases in the paper, the author discusses some discrepancies experienced during the preparation stage, design and implementation especially the project management aspect. It is the intention of this paper to show the experience and lessons obtained from this project by the author and compare them with the Swedish experience. Among other things, the author has reached a conclusion that the method of consultation to the end user of the project used by the designers facilitated a smooth implementation of the project. It has been realised by the author that projects funded by external financiers do not leave enough freedom for the beneficiaries of the funds to decide on how best to use the donated funds. Furthermore the paper will show how the Tanzania's General Form of contract as well as the East African Form of Contract needs constant updating so as to enable them to keep pace with the ever-changing conditions in the construction industry. This paper enables readers to draw necessary conclusions as to what can be adopted from the Tanzanian and Swedish experiences for better project management.

Introduction

The paper mainly discusses an infrastructure rehabilitation and development project in the municipality of Mwanza-Tanzania. Firstly it is important to discuss the genesis of this project, highlighting geopolitical, economical and cultural aspects of the country itself.

During the inception of this project the government of the United Republic of Tanzania in collaboration with the World Bank, reached an agreement with Councils that were to become beneficiaries of the project, on various aspects of the project. These agreements were concluded in the form of the Memorandum of Understanding (MoU).

The Prime Minister's Office signed these contracts on behalf of the government and after having been ratified by respective full councils ,these contracts were also signed by the councils. The main actors of the project were therefore the World Bank through the International Development Agency (IDA), the Prime Minister's Office (PMO) and the Ministry of Water (MoU) on behalf of the Government of Tanzania and the nine Municipal Councils.

A national steering committee was established to oversee general implementation of the project and to liase with the donor agency-the World Bank. The steering committee then formed a project management unit (PMU). The ministry of water formed a project implementation and co-ordination unit (PICU) to oversee implementation of the project components related to it-water supply and sewerage system.

About the country

Tanzania, an African country borders with Kenya and Uganda on the north, Rwanda, Burundi and the

Democratic Republic of Congo on the west, Zambia, Malawi and Mozambique on the south and the Indian Ocean on the east. Tanzania is a united republic between the Mainland Tanganyika and the isles Pemba and Zanzibar. This Union was formed in 1964 after Zanzibar's revolution in early January 1964, which ended the sultanate in the two islands in the Indian Ocean. Tanganyika got its independence from Britain in December 1961.

After the union, the two governments maintained their sovereignty and the union so far remains only on four main issues i.e. finance, defence, foreign affairs and education and culture. In Tanzania there are two governments, that is, the union government and the revolutionary government Zanzibar. There are also two houses of representatives, namely the revolutionary council of Zanzibar and the Tanzania parliament. The revolutionary council consists of members elected in the isles only while the national assembly consists of members elected from constituents throughout the country. The formation of the government (Cabinet) is also similar to that of representatives. The President of Zanzibar appoints the revolutionary government of Zanzibar while the President of Tanzania appoints the government of Tanzania. Both the Tanzania national assembly and the cabinet consist of members from both sides of the Union. Tanzania is a democratic country. There are about nine political parties of which six of them have representatives in the national assembly. Multiparty democracy started in 1995 when single party democracy was abolished. At the moment CCM (Chama Cha Mapinduzi) is the ruling party, the incumbent president being its chairman.

Economy

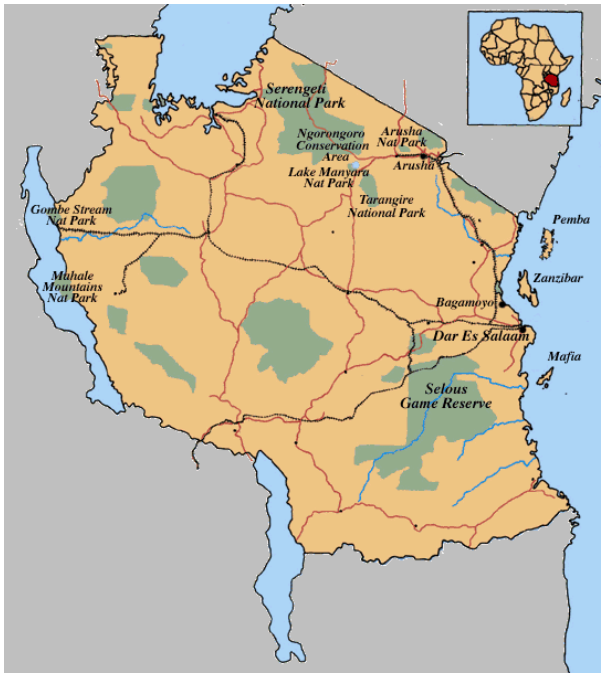
Tanzania is basically an agricultural country. About 80% of its export earnings depend on agricultural produce mainly coffee, cotton, tea and other crops. Fishing industry is also becoming one of the major foreign cash sources of income. Tanzania has a very big potential of natural resources. It has the world's biggest game reserve – Serengeti, and several other interesting wild life conservation. Tanzania's mineral potential is also very big. It's believed that it has more gold deposits than that of South Africa. Only a little percentage of that is commercially mined. . It's believed that it has more gold deposits than that of South Africa. Only a little percentage of that is commercially mined.

.Dar Es Salaam is the capital of Tanzania located on the east cost of the country and therefore the biggest port. There are other ports at the Indian Ocean where foreign vessels can dock.

Culture

Tanzania has a rich cultural heritage. There are about one hundred and forty four tribes in the country, the biggest being the Wasukuma. Pemba and Zanzibar are known for their blend of Arabic and African culture.

Kiswahili is the national language. This language was formed as a combination of ethnic African (mainly Bantu) languages and Arabic language. It started to form as a language during the slave trade era when slave traders



were forced to communicate with those who sold them slaves. English is the second official language and it is the media of instruction in higher learning institutions and in the high court. Tourism is being promoted and its potential is big. Mount Kilimanjaro being the highest in Africa is one of the major attractions in the country.

The Maasai and their unique culture are something to admire. The water bodies i.e. Lake Victoria (second largest on earth), Lake Tanganyika, Lake Nyasa all surrounding the country on the North, West, South and the Indian ocean on the east makes fishing culture common throughout the country.

The Project

Tanzania, like most developing countries got independent in early sixties and was left with little infrastructure by the colonisers. These included a single line railway system, some few airports, water supplying systems and roads.

There were few paved roads, mainly in urban areas and gravel roads. These few infrastructures were not maintained or ill maintained such that when their design period elapsed little could be done to improve them. This situation, as it was later to be found, was due to inadequate capacity of the state organisations to do the necessary maintenance – urban roads and other service infrastructures were left to the local authorities for keep and maintenance. Somewhere towards the end of the eighties, the Government of Tanzania, together with the World Bank decided to conducted a study in order to identify the key problems facing local authorities that resulted into failure to provide services and maintain the existing infrastructures. In 1994, an Urban Sector Engineering Project (USEP) was launched, covering nine municipal authorities, to design infrastructure rehabilitation especially roads, and find solutions to the problems identified in a study. USEP, as the project was shortly called, finished its objectives in 1996 and in 1997 the

Urban Sector Rehabilitation Project (USRP) was launched, as a second phase, to implement the USEP designs and proposals in the nine municipalities

Design Stage

This project which its main objective was to build capacity of the nine municipalities, considered several areas of importance, which if corrected and assisted would enable these municipalities to sustain their existing and new infrastructures. It was therefore the duty of the pilot project – USEP to identify these areas, draw recommendations and design for rehabilitation and construction of some infrastructures so that the participating agencies could utilise these facilities as a learning platform, to build their capacities during implementation, and at the same time various performance indicators observed as a measure of their abilities to sustain those investments. During this stage, PMU experts were instructed to employ consulting companies in the areas of finance, personnel, and engineering/architecture so that each of these consultants identify particular problems and recommend their solutions. Financial consulting firms were to identify key financial problems facing these municipalities. They were to find out why the municipalities did not reach their budget targets and whether their expenditures were in line with the general government expenditure and accounting procedures. Then the consultant was, in collaboration with experts from these municipalities, to draw guidelines, acceptable to both the government and the municipalities, about financial matters in general. This was very important because the issue of sustainable development as it was learned, was basically dependent on the financial capabilities of these municipalities and this was to be guaranteed. It was therefore imperative that any investment to be done in the pilot projects will depend on several factors but mainly on the ability of every municipality to sustain it. The most reliable performance indicator being the financial performance with respect to set up targets in a period of five years. At the end a local government accounting manual was established, which all nine municipalities were obliged to adhere to in regard of all financial matters.

The personnel consulting companies were engaged, with the assistance of personnel officers from the Municipalities, to identify problems facing municipalities in terms of personnel. It was the duty of the consultant together with their fellow personnel officers to conduct a thorough management audit, in order to determine the exact number of employees required in every department in every municipal council. This was supposed, and it did, show their level of education and training needs. This study was also conducted to councillors, as it was realised that some councillors do not know their responsibilities and rights as a result decision making becoming a problem. So general institution strengthening strategies were drawn, whereby those who were obviously redundant were retrenched and those who needed additional training, including councillors, were sent for training. It was at this juncture that executive directors and heads of department were send to three months compulsory management training. Council meeting procedures were reviewed and an amendment to the relevant act was done. The Engineering consultants were charged to corporate with technical personnel of municipalities to identify acute engineering problems facing the municipality, and suggest means and ways to rectify them in a context of a pilot capacity building project.

Project Organisation

As pointed out earlier, this project was to be executed in two phases i.e. USEP and USRP. The organisation structure of the USEP phase differed from that of USRP in a sense that the USEP phase did not include contractors and managers on site. The aim (main task) of the project was to identify, and find solutions through recommendations. As long as this project was to be executed in two phases the organisation structures also depended on the phase of the project. The first phase structure started by the Government of Tanzania down to the Municipal Full Councils. The second phase structure started by the Government of Tanzania down to the Municipal Director's level. The intermediate levels depended on the funetions they were to perform. It will be noted that in the second phase level the Full Council will be replaced by the Municipal Director by a simple reason that execution of the project much depended on the executive structure than the civic leadership.

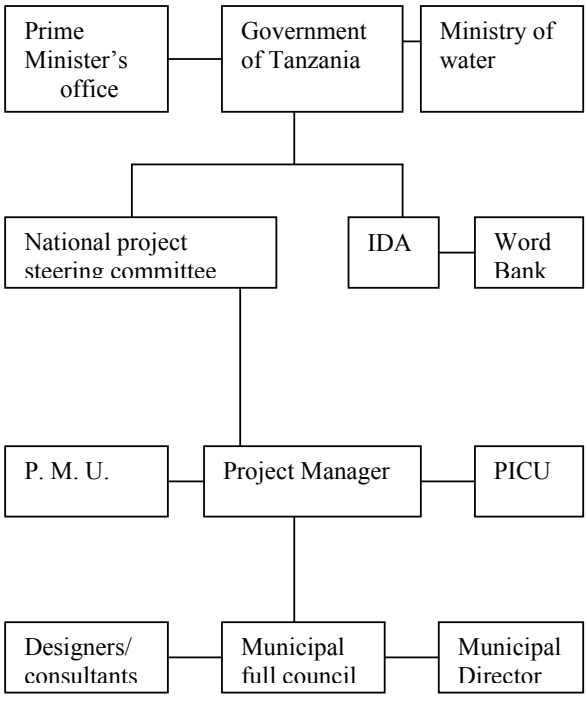


Diagram 1.First phase organisation structure.

I D A –International Development Association

P M U – Project Support Unit

P I C U – Project Implementation and Co-ordination Unit.

This organisation chart has been prepared in such a way that the reader will distinguish the organisation during the design stage and the organisation during the production stage. The Full council in this stage was made part of the decision-making hierarchy due to the fact that the project objectives required that councils become integral parts of the whole project decision-making bodies. This was a pre-condition made by the World Bank in regard of the participatory approach to be applied in this project. The old system of top-down way of doing things was completely not acceptable in this project.

The government of Tanzania as pointed out earlier is represented by the Prime Minister's Office (PMO). The Prime Minister then appointed a National Steering Committee to act on behalf of the client in this project. Members of the steering committee included the permanent secretary in the Prime Minister's Office as chairperson, and then other members were permanent secretaries from ministries of finance, local government and regional administration, water and energy, and the ministry of works. The main function of the steering committee was to deal with matters related to personnel recruitment i.e. project manager and his project management unit (PMU). Then other functions of the steering committee were to approve and control expenditures of the project manager, as per budget, with consultation to the World Bank. Together with those two functions, the steering committee was responsible to see that government interests and policies were protected in the course of planning, execution and monitoring of the project. This was important because this project covered nine municipalities with approximately 45% of the population of the country.

After the project manager and his project management unit were recruited by the steering committee, their primary task was to plan the implementation of the project. Here we have to distinguish between the two phases of the project – USEP and USRP.
During the USEP phase, the project manager and his team were charged to procure consultants, earlier mentioned, plan their consultation framework with the municipal councils so that the basic problems be identified in collaboration with the stakeholders themselves. They were supposed to facilitate the consultants and municipal councils with everything necessary in order to achieve the goals of the project's phase. It was at this phase where problems were identified, and design for the infrastructures was made.

Project Purchasing

As indicated earlier in the report, most of the purchases done during this phase of the project were done on management levels. This means that most of the equipment's purchases were to be used in offices and some vehicles as working tools and transportation facilities. A standard purchase procedure was used on purchasing office equipments, and when a large amount of an item was required, normally the procurement specialists were involved. Everything purchased during this phase must have been provided for in the project budget document. The project manager authorised these purchases and reported back to the National Steering Committee quarterly

Procurement

The project management unit (PMU) through the Central Tender Board did the process of procurement of both equipment and services in this stage of the project. It is a requirement of law that every government project will be procured through the Central Tender Board and the client thereafter can enter into contract by the awarded bidder. Therefore procurement of equipment was done through the Central Tender Board after the procurement team has identified the required equipments in terms of quantity and quality. Then the documents were prepared and sent to the Central Tender Board for tender announcement through public media- normally official gazette. Then bidders were invited to buy documents from the Central Tender Board. These advertisements were also made available in foreign international papers for these tenders were open to bidders from all eligible source countries of the World Bank.

Then after tender opening, which was done on a predetermined day, time and place, bids were then evaluated by a team of specialists appointed by the project manager. The Central Tender Board closely monitored the proceedings of evaluation. The evaluation team in this phase of the project did not have much to do for mainly the tenders were of service provision, design and consultancy. The team sent its recommendations to the Central Tender Board, which later informed the client of the successful bidder whom the contract should be awarded.

Contracting

The client awarded the contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated bid price, provided that such Bidder has been determined to be

(a) eligible in accordance with the provisions of the eligibility of bidders ,and
(b) qualified in accordance with provisions of qualification of bidders.

Notwithstanding the above, the employer reserved the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the effected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the employer's action.

Then the client notified the bidder whose bid has been accepted prior to expiration of the bid validity period. This letter of acceptance stated the sum that the client will pay the contractor in consideration of the execution, and completion of the job. This notification of award constituted the formation of the contract, subject to the bidder furnishing the **performance bond**, which the bidder shall have delivered to the client within 21 days after receiving the letter of acceptance. This performance bond was to be in the form of a **bank guarantee** or in an amount specified in the contract data.

All stakeholders of the project did the planning of this project in a way. The project manager together with his project management unit did plan the initial stages of the project. These stages included the organisation, purchasing of the working tools, and how to go about the procurement process. The consultants made the planning of design procedure themselves. The project manager was to co-ordinate and facilitates co-operation and interaction between the different consultants and the local authorities. This co-ordination and facilitation was important, as the aim of the project itself was to make sure of maximum co-operation between consultants and local authorities. It was during this stage that various problems were identified and their solutions derived. Then after most of the design and problem solutions were identified, then the project management unit together with the municipal authorities started to prepare the project implementation plan (PIP). This plan, which was agreed upon by all parties responsible in the project, was then sent to the national steering committee for approval and subsequently to the World Bank in Washington for final approval. In this plan all matters regarding the project, their financial implications, time for implementation, and the main actors were determined. It was during this planning period that the sense of ownership was realised to the participating agencies.

Project Financing

The World Bank financed this stage of project completely. The Government of Tanzania was not supposed to contribute anything towards financing this stage of the project. The national steering committee and the World Bank did control of expenditures. The project manager was authoring payments within the project budget and framework. If there was to be any variations in the project, which was not foreseen, then it was the duty of the project manager to send a request to issue a variation order to the consultant. Only after when a **no objection** was received from the World Bank was the manager able to issue that order.

Budget and Budget Control

The budget of this project was made in two phases. The general budget for the whole project was estimated to be about sixty million USD for both phases of the project. This budget was unfortunately based on the amount available and not the needed money to address the problems identified especially when it came to infrastructure budgets. The first part of the budget was made for the USEP phase. This budget was to carter for that phase alone. It was the duty of the project manager to prepare a working plan by which a budget can be drawn. This working plan included the expected expenditures for both overheads and consultancy services. Then having been approved the manager was given permission to call for the consultancy services and effect other payments. Control of this budget was again done by the national steering committee and the World Bank.The manager was made to understand that there was no money for any unexpected or unbudgeted for expenditures .In case the manager came across something which must be paid for, then it was up to him to know that this money must be obtained from the money already allocated in the project. There was no money out of the budget, which was to be given to any project activity, which was not budgeted for.

Information Technology

Information technology was used during all stages of the project. This was necessary due to the fact that data collection and storage was to be done with a high degree of accuracy and efficiency. This data was to be used in the design and execution of the project. Proper collection and storage of information was very vital as long as accuracy of the information collected determined the design accuracy. During design, consultants were advised to use CAD (computer aided design) and the overall management of the project was also computer aided (CAM). In the design of roads special software was used which those two counterpart personnel attached to the project didn't know. The architectural designs were made on computers using AutoCAD programmes. The use of computer software in design was also emphasised by the fact that with data in the computer it was easy to communicate with the different councils for clarification of an issue. With CAD all design information was stored in the computers and therefore it was easy for any changes to be made when the need arose. This also helped in terms of time saving. The design would have taken longer if information technology was not put in use. With longer time in design so many parameters taken into consideration during design would have changed hence causing disparity between the actual site conditions and the designs themselves. Information technology also helped with the planning and forecasting of scenarios. Different situations could be simulated in order to determine a pattern or foresee a situation in a process. This enabled consultants to ask important questions to their council colleagues during the fact-finding missions. Information technology was also used to seek more information on something, which was not readily understood. For example, when trying to establish the extent of damage in the underground storm water drains, a close **circuit television camera** (CCTV) was applied. Again the use of information technology as a fast way of communication was very much encouraged for it was easy, say, through the internet to get any information from other towns or other countries when required. This could be done through the Internet or by email.

Experience to Use in Future Projects

The methods used during the design stage were very efficient and recommended for any future application. It is not secret now that without proper use of the information technology, possibilities of errors is very high. The strategy of collaboration and partnership at all stages was also something to be recommended. The participatory approach adopted was encouraged for it gave confidence and better understanding by all parties of the crucial issues, and what should be expected of the project, from the very beginning. This gave all those

involved some sense of being valued and sense of ownership. This sense of ownership is very important when it comes to the question of sustainability of investments. For example, during the design of roads, the use of bitumen type mc30 and mc3000 was discussed at length in relation to life circle and maintenance costs. It was at this stage that the concept of participatory design was found to be very essential, for would it had not been for the stakeholders' involvement the issue of the type of bitumen to be used wouldn't have been mentioned.

Conclusion

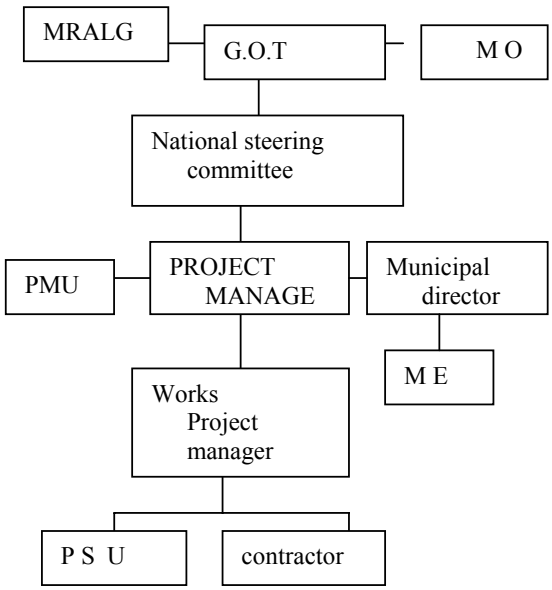
I find it very necessary to say that the design method/procedure used by the consultants by the advice of the client was very usefull. This approach gave confidence to all participants of the design process and it perfectly fulfilled the project target at that stage i.e. capacity building by transfer of skill. This also was in line with the general government trend to switch from the top-down way of doing things. Although a lot of time was spent on the preparation phase, the long term objectives of the project will be fulfilled without much problems as it would have been the case of rapid decisions without careful consideration of the future consequences .I would also like to note that all-gender participation was very much encouraged as long as future and sustainable development much depended on rational participation of all. It is now my opinion that long term objectives of the project were not properly addressed during the design stage because the budget for the infrastructure was not determined by the scope of works, but by the amount of money the Bank was prepared to give. Therefore some essential matters of this project's life circle were not seriously taken into consideration.

Production Stage

As I said earlier, the production stage of this project was named as the second phase of the project and was given another name i.e. Urban Sector Rehabilitation Project (USRP).

Due the fact that the role of these two phases differed, it was imperative that their organisation structure also will be different. This was even compounded by the fact that players and their roles changed.

During this stage all documents necessary for the project implementation were already prepared .The project manager and experts from the project management unit were now supposed to start the tendering process. By nature and complexity of the project on a national level, it was decided that every project component would have its project consultant, who will then appoint a manager to supervise that particular component on behalf of the project manager. These managers were to form under them project support units (PSU) in each project town. These project support units were supposed to incorporate members of the respective local authority to act as counterpart staffs on the day to day supervision of the project. The PSU consisted of one project co-ordinator, one deputy project coordinator, a counterpart staff and a secretary. This measure was taken so that the objective of the project will also be fulfilled even on this stage i.e. capacity building by transfer of knowledge and experience. The PSU reported to its manager and this manager reported to the project manager of the project. This arrangement was made very clear to the concerned parties such that confusion should not occur in the course of project implementation. The chain of command was also made clear to the contractor as who will be responsible for the day to day supervision of the project and as to when the contractor should seek intervention of a higher authority. The following is the organisation chart during the production stage.



G O T- Government Of Tanzania
M R A L G- Ministry of Regional Administration and Local Authority
M O W-Ministry of Water
P M U-Project Management Unit
M E –Municipal Engineer
P S U-Project Support Unit

Organisation chart of the project execution stage.

As seen from the chart the Government of Tanzania was the client to this project. It was represented by two ministries each taking care of the relevant component of the project. The ministry of regional administration and local authority was made to oversee the general implementation of the project. The ministry of water was to concentrate on the implementation of the sewerage component of the project. Reporting system in this project was to start from the bottom to the top.

The government appointed the National Steering Committee under the ministry of regional Administration and Local Authority to supervise general implementation of the project by both ministries. Formerly, in the first phase of the project (USEP), the National Steering Committee was under the Prime Minister's Office.

Members of the committee were made to remain the same for continuity purposes. Then the committee

appointed a new project manager who was charged to run the project on a day to day basis. This project manager was to be assisted by the Project Management Unit from the Ministry of Regional Administration and Local Governments and by The Project Implementation and Co-ordination Unit from the ministry of water. The municipal directors were to supervise the project implementation administratively by giving the necessary assistance to the works project managers appointed by project consultants. Municipal directors were also to be assisted by their municipal engineers when it came to technical matters of the project .The works managers appointed **Project Support Units** (PSU) in each project town and municipalities were required to delegate one engineer as a counterpart staff to this unit. The municipal engineer seconded this counterpart staff to the project so that the municipal engineer can get the daily progress report of the project and in turn pass that information to the municipal director.

The project support unit is headed by the project co-ordinator. Then there is a deputy project co-ordinator and the counterpart engineer representing the municipal engineer. In the project support unit there is a none technical staff (secretary) who runs the secretarial duties in the unit. There is also a messenger who helps with none technical duties out of office. Then on the other side to that level there is a contractor who was procured by the client through the project manager and the Central Tender Board (CTB). The central tender board was involved in the procurement of the contractor because it is law that all government contracts are procured by the board with the assistance of the client of the project.

The contractor reported to the project co-ordinator on day to day activities and when something big happened it normally has to be reported to the works manager who subsequently reports that to the client. But if the issue at hand is of administrative nature, the project co-ordinator or works manager will report the issue to the municipal director through the municipal engineer. When there is an issue which, through the counterpart staff, the municipal engineer wants implemented in the project then the works manager will be notified .If the works manager thinks that he can not implement that, then he will normally contact the project manager through the PMU for permission. The engineer in the PMU will then contact the municipal engineer for clarification and when they agree the works manager will be required to issue a variation order to the contractor.

Project Tendering and Contract

Preparation of Bid Documents

Bid documents for tendering were prepared by the project manager with the assistance of the project support unit and PICU. These documents were first circulated to the municipalities for the council to check on their relevancy to the jobs in each council town. After confirmation from each town that the documents were fine the project manager took these documents to the Central Tender Board so that the board can announce the tender.

Invitation for Bids

It was announced that the Government of Tanzania has received a credit from the International Development Association towards the cost of the Urban Sector Rehabilitation Project (USRP) and intended to apply part of the funds to cover eligible payments under the contract for the rehabilitation and improvement of roads and drainage in Mwanza. Bidding was open to all bidders from eligible source countries as defined in the guidelines: **Procurement under IBRD Loans and IDA Credits.**

Therefore the Central Tender Board invited sealed bids from eligible bidders for the rehabilitation and improvement of various Municipal roads and drainage in the municipality of Mwanza- Tanzania. The work included site clearing, earthworks, construction of bases, pavement surfacing, culverts and storm water drains. The details of the work in approximate quantities for major bill items was given as follows:

(I) Site clearance 10 Ha
(ii) Earthworks 29,460 m²
(iii) Sub base 15,500 m³
(iv) Base course 6,490 m³
(v) Bituminous surface dressing
-1st seal coat (19mm) 48,950 m³
- 2nd seal coat (9.5mm) 51,210 m³
(vi) Gravel surfacing 20,880m²
(vii) Concrete pipe culverts
-300mm 350m
-750mm 85m
-900mm 63m
-1200mm 180m

(viii) Incidentals.
- 100mm Continuous Road marking lines 8,860m
- 400mm Continuous Road marking lines 426m
- Standard Road Signs (assorted) 104 nos
- Grouted RipRap 37,855m².

It was further announced that bidding documents were to be purchased by interested bidders on submission of written application at the office of the secretary of the Board (Address and contacts given).

The bids were valid for a period of 90 days after bid opening and must be accompanied by security in original and in an acceptable form of thirty one million, five hundred thousands shillings (Tsh.31, 500,000/-) or its equivalent in a freely-convertible currency, and must be deposited in the Tender- Box of the Central Tender Board at the given address or sent by a registered post clearly addressed to the Secretary Central Tender Board, to reach him before the deadline for submission of bids.

The deadline for submission of bids was given and it was stated that bids would be opened, in public and in the presence of those bidders' representatives who choose to attend shortly thereafter at delivery address given above.

It was further stated that qualified domestic contractors are to receive a margin of preference of 7.5% I bid evaluation in accordance with the World Bank Guidelines

It was further stated that telegraphic, telex, telefax, and late non-telegraphic, telex, telefax bids will not be accepted.

Lastly the announcement stated that the Central Tender Board reserved the right to accept any bid and to reject any or all bids without thereby incurring any liability to the effected bidders.

Signed by the secretary to the board.

Eligible Bidders

1. The invitation for bids was open to bidders from eligible source countries as defined in the Procurement Guidelines. Any materials, equipment and services to be used in the performance of the contract shall have their origin in eligible source countries.

2. All bidders were to produce a statement, that the bidder (including all members of a joint venture and subcontractors) is not associated, nor has been associated in the past, directly or indirectly, with the consultant or any other entity that has prepared the design, specifications, and other documents for the project or being proposed as engineer for the contract. A firm that has been engaged by the client to provide consulting services for the preparation or supervision of the works, and any of its affiliates, shall not be eligible to bid.

3. Government owned enterprises in the employer's country might only participate if they are legally and financially autonomous, operate under commercial law, and are not dependent agency of the **Employer** (The Government of Tanzania).

4. Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the World Bank in accordance with conditions of the credit.

Qualification of the Bidders

All bidders were to provide **Forms of Bid** and qualification information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

In the event that pre-qualification of potential bidders was to be done, only bids from pre-qualified bidders would have been considered for award of contract. These qualified bidders should have submitted with their bids any information updating their original pre-qualification applications or, alternatively, confirm in their bids that the originally submitted pre-qualification information remained essentially correct as of the date of bid submission.

But as long as the employer never did any pre-qualification, then all bidders were asked to provide the following information and documents with their bids: -

(a) Copies of original documents defining the constitution or legal status, place of registration, and principal place of business, written power of attorney of the signatory of the bid to commit the bidder.

(b) Total monetary value of construction work performed for each of the last five years

(c) Experience in works of similar nature and size for each of the last five years, and details of work under way or contractually committed: and clients who may be contacted for further clarification on those contracts.

(d) Major items of construction equipment proposed by the employer to carry out the contract

(e) Qualification and experience of key site management and technical personnel proposed for the contract

(f) Reports of the financial standing of the bidder, such as profit and loss statements and auditor's reports for the past five years

(g) Evidence of adequacy of working capital for this contract

(h) Authority to seek references from the bidder's bankers

(i) Information regarding any litigation, current or during the last five years, in which the bidder is involved, the parties concerned, and disputed amount.

(j) Proposals to subcontracting components of the works amounting to more than 10% of the contract.

Bidders were invited for a site visit, which was to be conducted by the employer and a representative of the consultant responsible for the design of the project.

Bidding documents

The set of bidding documents comprised of: -

(a) Instruction to bidders
(b) Forms of Bid and Qualification Information
(c) Conditions of Contract
(d) Contract Data
(e) Specifications
(f) Drawings
(g) Bill of Quantities
(h) Forms of Securities.

A prospective Bidder requiring any clarifications of the bidding documents was to notify the employer in writing or by cable. The employer was supposed to respond within 28 days prior to the deadline for Bid submission. Copies of the employer's response were to be distributed to all purchasers of the bidding documents, including a description of the enquiry, but without identifying its source.

Bid Prices

The contract shall be for the whole Works, as described in the bid documents based on the priced Bill of Quantities submitted by the Bidder. The Bidder was supposed to fill in rates and prices for all items of the Works, described in the Bill of Quantities. Items for which neither rate nor price were entered by the Bidder were not to paid for by the Employer when executed and shall never been deemed cover by other rates and prices in the Bill of Quantities.

The unit prices were to be quoted by the Bidder entirely in Tanzania shillings. Foreign currency requirements were to be indicated as a percentage of the Bid Price (excluding provisional sums) and were to be payable at the option of the Bidder in up to three foreign currencies of any member country. For the purpose of that clause the European currency (ECU) was also considered an eligible currency. The rates of exchange to be used by

the Bidder in arriving at the local currency equivalent and the percentage(s) mentioned above were to be the selling rates for similar transactions established by the authority specified in the contract data prevailing on the date 28 days prior to the latest deadline for submission of Bids.

These exchange rates were to apply for all payments so that no exchange risks will be borne by the Bidder. If the Bidder uses other exchange rates, the bid will first be converted into the amounts payable in different currencies using the rates quoted in the Bid and then reconverted to the Employer's currency using the exchange rates stated in the Bid documents. The contract was awarded to Nyanza Road Works at a corrected Bid Price of Tanzanian shillings one billion five hundred and thirty two million. (1,532,000,000/-). equivalent to 2,451,000 USD.

Bid Validity

The Bids were to remain valid for the period of specified in the bidding data. The employer was, however, permitted to request for the extension of the period under certain circumstances, whereby the **bid price** was to be adjusted in case the extension was more than 60 days. The factor to be used in that case must be the one specified in the Bid Data. This was too applicable because the **contract prices** were all fixed.

Bid Security

The Bidders were required to furnish, as part of the bids, Bid **Security** in local currency or in freely convertible currency, in an amount specified in the Bidding Data.

Any Bid not accompanied by an acceptable Bid Security was to be treated as not responsive and therefore rejected by the Employer .The Bid Security of unsuccessful Bidders were returned within 28 days of the end of the Bid Validity period as specified in the Bidding Data. The Bid Security of the successful Bidder was discharged when the bidder signed the agreement and furnished the required Performance Bond. These securities may have been forfeited

(a) If the Bidder withdraws the Bid after Bid opening during the period of Bid validity.
(b) If the Bidder did not accept the correction of the Bid Price as stipulated in the Bidding Data.
(c) In case of a successful Bidder, if the Bidder fails within the specified time limit, to sign an agreement or furnish the required Performance Security.

Alternative proposals by Bidders were not allowed and were not to be considered, unless specifically allowed in the Bidding Data. If allowed, the Bidder was required to submit a Bid that complied with the requirements of the Bidding Data including the proposed technical alternatives. This must have included also all necessary information for a complete evaluation by the Employer.

After the Bids were submitted the Employer proceeded with the process of Bid Opening. This process was not Confidential and was open to all Bidders. The process of evaluation, examination, comparison of Bids and recommendation for award of contract was strictly confidential, and was not to be revealed or disclosed to Bidders or any other person not officially concerned by such processes until the award to the successful Bidder has been announced. No Bidder was allowed to contact the Employer on any matter relating to his Bid from the time of the Bid opening to the time the contract is awarded. Bids after being examined for responsiveness and found to be substantially responsive, were all checked by the Employer for any arithmetic errors. Then the amount stated in the Bid was adjusted by the Employer in accordance with the above procedure for the correction of errors and, with concurrence of the Bidder, shall be considered as binding upon the Bidder .If the Bidder did not accept the corrected amount, the Bid will rejected, and the Bid Security may be forfeited in accordance with conditions of Bidding Data. During evaluation the Employer determined every Bid Price by adjusting as follows:

- making any correction for errors as stated above
- excluding provisional sums and the provision, if any , for contingencies in the Bill of Quantities, but including Day work especially where priced competitively.
- Making appropriate adjustments to reflect discounts or other price modifications offered in accordance to the Bidding Data.
- Making an appropriate adjustment for any other acceptable variations , deviations , or alternative offers submitted in accordance with Bidding Data

The Employer reserved the right to reject or accept any variation, deviation or alternative offer. The estimated effect of any price adjustment conditions under certain conditions of contract, during the period of contract implementation, was not to be taken into account in Bid evaluation.

Domestic Preference

It was indicated in the Bidding Data that, domestic contractors might receive a margin preference in Bid evaluation. Domestic Bidders were required to provide evidence necessary to prove that they meet the following criteria to be eligible for a 7,5 % margin of preference in comparison of their Bids with those of Bidders who do not qualify for the preference. They were supposed to:

- be registered within the country of the Employer
- have majority ownership by citizens /nationals of the country of the Employer
- not subcontract more than 50% of the works measured in terms of value to foreign contractors ,and
- satisfy any other criteria specified for the purpose of domestic preference eligibility, as specified in the Bidding Data.

Joint ventures between domestic and foreign firms could be eligible for the margin of preference provided that the domestic partner:

- individually satisfy the above criteria of eligibility for preference
- Demonstrate a beneficiary interest of no less than 50% in the joint venture, as demonstrated by the profit and loss sharing provisions of the joint venture agreement.

- Will , under the arrangement proposed , carry out at least 50 percent of works , measured in terms of value , which should have excluded any materials or plant which are were to be directly imported by the domestic partner

Award of Contract

The Employer awarded the contractor whose Bid was determined to be substantially responsive to the Bidding documents and who has the lowest evaluated Bid Price, provided that such Bidder was determined to be eligible and qualified. This was the award criterion.

The Bidder whose Bid was accepted was notified of the award by the employer, through the Central Tender Board, prior to the expiration of the Bid Validity period by cable, telex, or any other means. This letter, which is commonly called the **letter of Acceptance** stated the sum that the Employer will pay the contractor in consideration of the execution, completion, and maintenance of the works by the contractor as prescribed by the contract, also called the **contract price.**

The notification of award constituted the formation of the contract, subject to the Bidder furnishing the performance security and signing the agreement. The agreement constituted all agreements between the contractor and the employer.

Then the Bidder signed an **agreement**, which incorporated all agreements between the Employer and the successful Bidder .The agreement was signed by the Employer and sent to the successful Bidder within 28 days following the notification of award along with the letter of acceptance.

Within 21 days of receipt the successful Bidder signed an agreement and delivered it to the Employer. Upon furnishing by the successful Bidder of the Performance Security the Employer promptly notified the other Bidders that their Bids have been unsuccessful.

Within the same period of time, after receiving the letter of acceptance the successful Bidder delivered to the Employer a Performance Security in the form of a Bank Guarantee, by a bank located in the country of the Employer.

Failure of the Bidder to comply with the performance security requirements would have constituted to sufficient grounds for cancellation of the award and forfeiture of the bid security.

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The following is a sample of the Letter of Acceptance signed by the contractor.

Standard Form: Letter of Acceptance

*(Letterhead paper of the Employer)*_____*(date)*

To: _____

(*Name of the contractor)*

_____

(*Address of the contractor)*

This is to notify you that your Bid dated _____ for execution of the_____*(name of the contractor identification number, as given in the contract data)* for the Bid contract of the equivalent of

_____

*(Amount in numbers and words)*_____

(*Name of currency*), as corrected and modified in accordance with instructions to Bidders is hereby accepted by our Agency.

(a) We accept that _____ (*name proposed by Bidder)* be appointed as Adjudicator.

(b) We do not accept that _____ (*name proposed by Bidder)* be appointed as the adjudicator ,

(c) and by sending a copy of this letter of acceptance to the Tanzanian Institution of Project Mangers we hereby request the institution, the appointing authority, to appoint the adjudicator in accordance with the provisions of the Bidding Instructions.

You are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Authorised Signature:

_____

Name and title of signatory:

_____

Name of Agency _____

Attachment: Agreement.

The following is the standard form of Agreement signed by the parties.

Standard Form: Agreement
AGREEMENT
This Agreement, made this _____ day of _____19____between_____
(*Name and address of employer*) (Herein called the employer) and_____ (*name and address of contractor)* (herein called the contractor) of the other part.

Whereas the Employer is desirous that the contractor execute _____

(*Name and identification number of contract***) (**Hereinafter called the works) and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defect therein.

Now this Agreement witness' as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the **Conditions of Contract** hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor thereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respect with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of the defects wherein the contract price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written:

The common seal of _____
Was hereto affixed in the presence of:

Signed, sealed, and delivered by the said
_____

In the presence of
_____

Binding signature of Employer
_____

Binding signature of Contractor
_____

Production Planning

Time Control

Program: - Within the time stated in the contract data, the Contractor was to submit to the Project Manager for approval a Program showing the general methods, arrangements, order and timing for all activities in the Works. This was to be made in any form, which the Project Manager could understand i.e.. either in the form of a Bar Chart or in the form of an Arrow Diagram.

An update of the program was a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining works, including any changes to the sequence of the activities. (Here the Project manager means the Works Project Manager –who in future will be referred to as the Project **Manager)**.

The updated program was to be submitted to the Project Manager at regular intervals for approval, no longer than the period stated in the Contract Data .If the Contractor did not submit an updated program within this period, the Project Manager may withhold the amount stated in the contract data from next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.

The Project Manager's approval of the program shall not alter the Contractor's obligations. The Contractor may revise the program and submit it to the project Manager again at any time. A revised program shall show the effects of **variations** and **compensation events**.

Extension of time

The Project Manager was entitled to extend the intended date of completion if a compensation event occurs or a variation is issued which makes it impossible for completion to be achieved by the intended completion date without the contractor taking steps to accelerate the remaining work, which would cause the contractor to incur additional costs. The manager could decide by how much or whether to extend the intended completion date within 21 days of the contractor asking the project manager for a decision upon the effect of a compensation event or variation and submitting full supporting information. If a contractor has failed to give early warning of a delay or has failed to co-operate in dealing with a delay, the delay by this failure was not considered in assessing the new intended completion date.

Site Meetings

Either the contractor or the Project Manager may require the other to attend a management or site meeting .The business of a management meeting shall be to review the plans of the remaining works and to deal with matters raised in accordance with the early warning procedure.

The Project Manager shall record the business of the site meetings and provide copies of the record to those attending the meeting and to the Employer .The responsibilities of the parties for actions to be taken shall be decided by the Project Manager either at the meeting

or after the site meeting and stated in writing to all who attended the meeting.

Early Warning

The Contractor shall warn the Project Manager at the earliest opportunity of a specific likely future events or circumstances that may adversely affect the quality of the work, increase the contract price or delay the execution of the works .The manager may require the contractor to provide an estimate of the expected effect of the future event or circumstance on the **contract price and completion date.** Under normal circumstance the contractor shall co-operate with the Project Manager in making and considering proposals for how the effect of such event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

The completion date for this project was supposed to be 72 weeks after signing of the contract .The start date was to be 4 weeks after the Contractor's reception of the letter of acceptance from the employer. But as things turned out the Employer could not handle the site to the contractor in time so as to enable him to start on time. This was due to the fact that there were problems as regards site **clearance**. In some areas people who had immovable assets in the road's right of way refused to leave and demolish their properties. Some of them went to court and were able to secure a court order restraining the Employer to demolish or alter in any way the said properties until a final ruling of the court over that issue. Due to that the employer had to negotiate with the contractor to push forward the starting date in order to allow for the court process to be finished. The contractor agreed and the start date was extended for one month.

In the course of project execution, site meetings took place without many problems except for the constant attempts by the contractor to direct more attention to issues of no relevancy to the works. The author has always been chairing these site meetings which are normally called by the project co-ordinator. In this case the project co-ordinator records the proceedings of the meetings and makes sure they are distributed to all concerned parties as per contract requirement.

In one of those site meetings it was observed that there was more bureaucratic in the decision-making arrangement of the project. This was due to the fact that if anything substantial was to be decided it will need the project co-ordinator to communicate with the works project manager first, and then the works manager if he can not decide upon that issue he will have to communicate with the Project manager for further decision. The project manager in some cases could not decide so he has to contact Washington for final decision. This process could sometimes take up to two months, in which the Contractor will be waiting without doing anything. This has caused a lot of loss to the project because normally these delays will amount into **compensation events.** This cumbersome procedure was

Discussed at the midterm review meeting, which took place a month ago in Dar-Es salaam where representatives of all stakeholders were present. Members of the meeting requested from the World Bank officials, to understand the unnecessary long procedure for rapid decision to be made. It was observed that not only the World Bank is interested to see that the project is a success, but every municipal council was aware of the need for this project to be successful. The chairman of the project's steering committee promised to take up the matter so that another approach can be used to arrive at decisions without affecting the work's progress.

Quality Assurance

Identification of defects

The project co-ordinator in this project was assigned the task of checking on a day to day basis the quality of the job being executed by the contractor. The co-ordinator will then inform the manager of any defects found in the works whereby the contractor can not take measures to rectify the defect. In that case the manager will issue an order to the contractor requiring him to rectify the defect.

This normally done by the co-ordinator who will issue an instruction to the contractor to search for defects and to uncover and test any work which is considered to have defects. If the manager instructs the contractor to carry out a test not specified in the specifications to check whether any work has a defect and the test shows that it does, the contractor shall pay for the test and any samples .If there is no defect, the test shall be a compensation event.

The project Manager is by this contract required to give notice to the contractor of any defect before the end of the Defects Liability Period, which begins at completion, and is defined in the Project Data .The defects Liability Period shall be extended for as long as defects remain to be corrected.

Every time notice of a defect is given, the contractor shall correct the notified defect within the length of time specified by the project manager. If the contractor has not corrected the defect within time given in the project manager's notice, the manager will assess the cost of having the defect corrected, and the contractor will pay this amount. There has been cases where the contractor will object to the defect correction instruction given by the manager on grounds that such work was not in the contract data, then this issue will always be referred to the project manager for clarification. Normally the manager will clarify and the matter will then be resolved. In case it turns to be true that the work being disputed was not there in the contract data, then this will be treated as a **variation** for which the contractor will be paid for its execution. At that point the contractor is entitled to apply for an extension of time if he thinks that necessary.

Cost or Economic Control.

As a measure of cost control, the bill of quantities contained items for the construction, installation, testing, and commissioning work to be done by the contractor.

This bill used to calculate the contract price. The contractor is paid for the quantity of the work done at the rate in the bill of quantities for each item. In case the final quantity of the work done differs from the quantity in the bill of quantities for the particular item by more than

25%, provided the change exceed 1 percent of the initial contract price, the project manager shall adjust the rate to allow for the change. The employer will allow the project manager to make changes of rates which will be more than 15 % of the initial contract price .It was made clear to the contractor that the project manager may request for a detailed breakdown of any rate in the bill of quantities.

Variations

Variations issued by the manager under this contract are supposed to be included in the updated programs of works produced by the contractor. This was made like this so the manager could be able to follow the timetable of the works. The contractor provides to the manager a quotation for carrying out the variation. The manager then assesses the quotation, which is given within seven days of the request or within any longer period stated by the manager and before the variation is ordered .If the work in the variation corresponds with an item description in the bill of quantities and if, in the opinion of the manager, the quantity of work above the limit of 25 % or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the bill of quantities shall be used to calculate the value of the variation .If the contractor's quotation is unreasonable , the project manager may order the variation and make a change to the contract price , which shall be used on the project manager's own fore-cast of the effects of the variation on the contract price.

Cash flow

After every updating of the project program, the contractor is required to provide the manager with an updated cash flow forecast. The cash flow forecast shall include, in this case, different currencies, as defined in the contract, converted as necessary using the contract's exchange rates.

Payment Certificates

The contractor submits to the manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously. Then the manager checks the contractor's monthly estimates and certifies or rejects the amount to be paid to the contractor. The manager determines the value of work executed. This value of work executed shall always comprise the value of the quantities of the items in the bill of quantities completed. This value of work shall also include the valuation of variations and compensation events. The project Manager may exclude any item certified in the previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

Payments

Payments are adjusted for deductions for advance payments and retention. The Employer, under this contract, pays the contractor the amounts certified by the project manager within 28 days of the date of each certificate. If the Employer makes a late payment, the contractor is paid interest on the late payment in the next payment. This interest is calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made. Items of works for which no rates or prices has been entered in, are not paid for by the Employer and are covered by other rates and prices in the contract.

Compensation Events

The following were agreed to be compensation events:

(a) If the Employer does not give access to a part of the site by the site possession date stated in the contract data.
(b) If the Employer modifies the schedule of the contractor in a way that affects the work of the contractor under the contract.
(c) If the project manager orders a delay or does not issue drawings, specifications, or instructions required for execution of the works in time.
(d) If the project manager instructs the contractor to uncover or to carry additional tests upon the work, which is then found to have no defects.
(e) If the project manager unreasonably does not approve a subcontractor to be let.
(f) If ground conditions are substantially more adverse than could have reasonably have been assumed before issuance of the letter of acceptance from the information issued to bidders (including the site investigation report), from information available publicly and from visual inspection of the site.
(g) If the project manager gives an instruction for dealing with an unforeseen event, caused by the employer or additional work required by the employer.
(h) If other contractors or public authorities, utilities, or employer does not work within the dates and other constraints stated in the contract and they cause delay or extra cost to the contractor.
(i) If the advance payment is delayed.
(j) If the project manager unreasonably delays issuing a certificate of completion.

If a compensation event would cause additional costs or would prevent the work from being completed before the intended completion date, the contract price shall be increased and /or the intended completion date shall be extended. The project manager in this contract decides whether and by how much the contract price shall be increased and whether and by how much the intended completion date shall be increased.

The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the contractor 's not having given early warning or not having co-operated with the project manager.

Retention

The employer retains from each payment due to the contractor the proportion stated in the contract data until completion of the whole of the works. On completion of the whole works, half of the total amount retained shall be repaid to the contractor and half when the defect liability period has passed and the project manager has certified

that all defects notified by the contract manager to the contractor before the end of this period have been corrected. On completion of the whole works the, the contractor may substitute retention money with "on demand" Bank Guarantee.

Liquidated Damages

The contractor shall pay liquidated damages to the Employer at the rate per day stated in the contract data for each day that the completion date is later than the intended date .The rate per day according to this contract is 1,000,000 /- Tanzania shillings. The total amount of liquidated damages shall not exceed the amount defined in the contract data, that is 10 % of the final contract price. Payment of liquidated damages does not affect the contractor's liabilities.

If the intended completion date is extended after the liquidated damages have been paid, the project manager shall collect any overpayment of liquidated damages by the contractor by adjusting the next payment certificate. The contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment at the rates formerly specified.

Finishing the Contract

Completion

The contractor shall request the project manager to issue a certificate of completion of the works, and the project manager will do so upon deciding that the work is completed. Then the Employer shall take over the site and the works within 7 days of the project manager's issuing a certificate of completion.

The contractor will then supply the project manager with a detailed account of what he considers payable under the contract before the end of the defects liability period. Then the contract manager will issue a defect liability certificate and certify any final payment that is due to the contractor within 56 days of receiving the contractor's account if it is correct and complete .All materials on site, plant, equipment, temporary works, and works shall be deemed to be the property of the Employer if the contract is terminated because of the contractor's default.

Conclusion

At the moment this paper is being prepared at least 60 % of the works have been done. The tendering procedure as has been shown did not pre-qualify bidders. As a result the project was left venerable to all sorts bidders. It was later observed that this could lead to a poor contractor getting the job. The element of pre-qualification is very important when dealing with government projects because there is a high demand of transparency and due to meagre money from the government these projects must be finished without problems.

It is my opinion that the World Bank as a financier did not achieve one of its project objectives –capacity building in totality. As you can see, the tender for the works was open to international competition, whereby giant multinationals were allowed to compete. This denied small local contractors a fair competition by a simple fact that they have little capital and equipment that automatically made their bid prices bigger than those of the big international construction companies do. Local contractors will be more fundamental when maintenance of these investments will start. This project, it is my opinion that could act as capacity building platform for small local contractors. The planners of the project thought that by the local preference incentive local contractors will be able to compete with international companies, but it never worked.

From the Swedish experience I have found out that the general conditions of contract were not satisfactory, that is why we had problems when it came to contradicting information or instructions. The general conditions did never specify in which sequence such information or instructions were valid, as it the case with the Swedish general conditions of contract

Property Management

As has been discussed earlier, the fundamental reason why this project was launched is the failure of the local governments to run and maintain the infrastructure left to them. After the outcome of the study conducted during the USEP project, it was obvious that lack of regular/or none maintenance at all was the reasons behind the failure of these infrastructures. So sustainability of these investments much will depend on the ability of the municipalities to maintain them. Therefore at the very beginning of this project maintenance planning was a major area of concern.

Maintenance Planning

The reasons why planning of the maintenance process was done at the very beginning of the project was that stated above. By collaborating with the municipal authorities the designers were able to estimate the relative abilities of each municipality to carry out the necessary maintenance works. Great effort has been made to make sure that the municipal capabilities to sustain these investments will be achieved. In doing so the following aspects have been taken into consideration during the design and planning stage of the project:

(a) Relocation of services in areas to be under the project was made in such away that in future maintenance of the services utilities will not affect the investments being made under the project .For example water pipes which normally used to pass through the centre of the roads were relocated such that there will never be any interference between the road and the water service anymore. The same was done with respect to the electric system and telecommunication lines. This was made to ensure maximum life span of the investments.

(b) The material to be used for construction was selected not only because of their availability and cost, but also by their long-term availability and maintenance costs. This was important because the

local councils don't have much money for expensive maintenance works. For example bitumen type mc3000 was adopted instead of mc30 simply because the later is very expensive when it comes to maintenance costs.

(c) Some project components were left out of the project because of their future impact on the life circle of the investments.

(d) Data collection was one of the most important aspects of the project. It was clear from the beginning that with proper information at hand the cash flow projections will be easy to determine and therefore prepare maintenance plans adequately. In this regard the contractors are require to produce as built drawings after completion of the project so that the client will have the actual information of the investment. This should include the type of materials used, their property and availability specifications.

Financial Allocations

The source of funds for the project was the loan from the World Bank. But future financing of the operation and maintenance of these investments was entirely the responsibility of the local authorities. Therefore it was agreed during the planning of the project that there would be two sources of funds for the operation and maintenance, namely: the road toll fund, community participation and the own source funds from the local council. The own-source funding of the O&M will be carried out by funds from the annual budgets of the councils .In the planning stage of the project, budgets of councils were projected for 15 years and some percentage of these budgets will be used for O&M. For Mwanza municipal council it was agreed that for regular O&M of roads at least 1% of the budget will be used for operation and maintenance of roads.

Equipment.

It was also important to earmark the necessary equipment that the prospective councils must possess in order to be able to carry out the necessary operation and maintenance of the infrastructure. This equipment was listed down and the client (GOT) will buy them as part of the capacity building process. Such items like motor graders, concrete mixers, bitumen sprayer etc have been purchased for the councils. Temporary equipment such as shovels will be the responsibility of the councils.

Manpower

The need to have qualified manpower was identified as one of the crucial things that should be achieved by the councils if sustainability of their development was to be guaranteed. Therefore special training courses have taken place for various employees of the council and councillors. At the moment two civil engineers are attending a special course in Denmark on pavement management.

Property Protection

In order to protect the invested properties adequately the government allowed local authorities to form special bylaws in their respective councils in order to protect these investments. The Roads and Highways Ordinance was also amended such that it will not contradict with these new bylaws. Among proposed bylaws one of them will allow local authorities to charge fees for users of these roads. Therefore it was passed in Mwanza that every motor vehicle more than 3 tonnes capacity will be charged a fee of Tanzanian Shilling 25000/- per year as plying fee.

Experience for Future Projects

In this project the life circle economy was not seriously taken into consideration at early stages of the project. This is a very important aspect for future projects. The design stage should involve at least all stakeholders in the implementation and use of the project products. Optimisation of resources against project requirements is very important especially when the project is limited in funding.

Conclusions

For any project to be well planned and designed the life circle economy must always be considered. This allows good operation and maintenance planning and therefore longer life span of the investment. The project will have to seriously look upon such measures if it really wants to achieve its goals.

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