CoST

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Construction Sector Transparency Initiative (CoST)- ETHIOPIA

Assurance Team Final Report
October 2010

Lake Tana Surrounding Projects

and

Ribb Dam Construction

October 2010

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1. EXECUTIVE SUMMARY

1.1. Project Description

1.1.1. Lake Tana Sub-Basin Surrounding Irrigation Project is one of the major projects financed by FDRE. The aim of the project is to increase irrigated agricultural output and productivity through developing 78,000 ha irrigable land within the sub-basin of the Blue Nile. The project consists about five dams named Gelgel Abaye I, Gelgel Abaye II, Megech, Ribb and Jemma dams. Currently, only Ribb dam is under construction with a contract price of 1.4 billion ETB. The construction process has been started following the completion of the feasibility study and the detail design work was underway in parallel to the construction. The Ministry has established project coordinating office for the coordination and monitoring activities.

1.2. Approach to Awarding Contract

1.2.1. The Consultant and the Contractor involved in the implementation of the project were appointed using a single source procurement and request for proposal methods. Both the consultant (Water Works Design and Supervision Enterprise, WWDSE) and the contractor (Water Works Construction Enterprise, WWCE) were invited to submit their proposal with respect to the job assignment concerned. Accordingly, the consultant and the contractor submitted their technical proposals and financial offers. The Ministry gave comment on the proposals so that the firms might amend and come up with revised proposals. Following negotiation, agreement was signed. Both the consultant and the contractor employed for the said works are government owned enterprises.

1.2.2. Government policy directs public bodies to undertake procurement of all items by open tendering unless there is a specific and good reason to use another method of procurement. Hence, it is clear that the appointment of the consultant and contractor for this case do not satisfy the conditions and requirements set by the Ministry of Finance for single source procurement method.

1.2.3. It is apparent that the use of single procurement method is neither effective nor efficient way of providing good value for money. By not seeking tenders from several suppliers, the Ministry lost the benefit of competition to identify the best supplier for the contracts. However, such procurement enables the client to settle disputes and differences amicably.

1.3. Project Progress

1.3.1. It is a common practice to notice considerable delays to implement projects that are awarded directly; the same has happened to this project. This is because the contract management and

follow up are loose and there is too much tolerance. Apparently the quality, cost and performance of the project is compromised.

1.3.2. The Feasibility Study and Detail Design of the five Dams have been completed by March 2010. However, a delay of 3 years close to 300% of the initial contract period has been recorded.

1.3.3. The amount of variation to be approved by the consultant is not marginalized by building percentage clause in the special condition of Ribb dam construction contract. So, the PE has no means to control the maximum variation amount. This can cause big mess on the budget requirement. It should have been included not only the maximum variation percentage amount to be approved by the consultant solely but also the limit to be approved by the client itself. The Public Procurement Authority (PPA) requirement limits a maximum of 25% total variations to be approved by the consultant and client. For variations greater than 25% of contract price, the client has to notify and get approval from the Ministry of Economy and Finance.

1.3.4. To date, the approved construction variation amount is 24,255,394.76 including 15% VAT. However, the effect of the variation on the program/time was not requested by the contractor to be analyzed and approved by the consultant and client.

1.3.5. Up to July 2010, three fourth (75%) of the dam construction period is elapsed. It is only one year left to finish the contractual period. However, so far the accomplishment is estimated 35% of the project which implies 40 % delay.

1.4. Recommendations

1.4.1. It may be good to apply the Government procurement policy in order to achieve better value for money.

1.4.2. We recommend the MoWR to use the PPA contract document for national level projects instead of FIDIC since there are built in special clauses required for specific national conditions.

1.4.3. For the successful accomplishment of the intended target, the MoWR should strengthen the Project Coordination Unit. The contractor should discharge its contractual obligation fully specially by mobilizing professionals and construction resources as per the contract agreement.

2. INTRODUCTION

2.1. Background

2.1.1. The Construction Sector Transparency Initiative (CoST) aims to increase the accountability of public sector organisations and construction companies for their construction projects. It will do this by disclosing information at all stages of the construction project cycle, from the initial identification of the project to the final completion. To achieve this, the disclosed information will be verified and analyzed for accuracy and factually assessed by experts AT appointed for this purpose to be easily understood by stakeholders.

2.1.2. It is being piloted in seven countries, Ethiopia being one of them. The MSG directs the implementation. It consists of representatives from government, the private sector and civil society. Country coordinating office is managing the pilot on behalf of the MSG.

2.1.3. Projects for the pilot study were identified before the AT team was assigned. In this assignment one professional was responsible to handle two contracts one consulting service contract and the other works contract. Here, the report deals with the works contract which is Lake Tana Sub-Basin Surrounding Project. The project consists about five dams named Gelgel Abaye I, Gelgel Abaye II, Megech, Ribb and Jemma dams to irrigate about 78,000 ha command area.

2.1.4. The assurance team appointed for this specific pilot study comprises two senior water resources engineers specialized in hydraulics engineering one as a team leader and the other as team member. The team has a collective responsibility to collect and analyse project information and generate analytical report of the assurance process. This report has been prepared by Tesema Habte, AT member.

2.2. Objectives of the Study

The role of the Assurance Team, who will be answerable to a National Multi-Stakeholder Group (NMSG) responsible for CoST, is to a role of interpretation in helping to make raw data disclosures understandable to a wider range of stakeholders.

The assurance process will have the following core objectives:

- collect the project information
- verify the accuracy and completeness of the information
- analyse the information and make informed judgements about the cost and quality of the project

- report on the findings regarding the cost and quality of the project and highlighting any outstanding questions.
- to produce reports that are clearly intelligible to the non-specialist.

2.3. Study Approach

2.3.1. The Assurance Team (AT) obtained an induction from the National Multi-Stakeholder Group (NMSG) at the beginning of this assignment.

2.3.2. The team had thoroughly reviewed the documents obtained. To check for consistency and accuracy, similar documents from consultants have been collected and analysed.

2.3.3. The collected data and information were compiled using the formats and tools given from the coordinating office of CoST-Ethioipa.

2.3.4. We have reviewed all available documents and held thorough discussions with the program coordinator and staffs involved on the project implementation so to get more insight on the case. This could help us to verify the accuracy and completeness of the information released. In the mean time, we explained the objective of the initiative and why the data are required. Following our review of the documents initially provided, we have been given latest correspondence letters and up to date reports.

2.3.5. Because of man power reshuffling and layoff cases, it was a challenge to get old documents and to trace them where they were shelved.

2.3.6. Initially availed data, documents and information fall into the following categories.

Ribb Dam Design

Report Stage	Report Type	Document Date	Volume	Prepared by
	Consultant Technical Proposal for Feasibility Study and Detail Design	November 2005		WWDSE
Feasibility Report	Executive summary	August, 2007		WWDSE in association with TAHAL Groups
Final Feasibility Report	Hydrological Investigation	August, 2007	Three	WWDSE in association with TAHAL Groups
Final Feasibility Report	Design criteria for Dams & Appurtenant Structures	August, 2007	Four	WWDSE in association with TAHAL Groups
Final Feasibility Report	Socio-Economic Study	October, 2007	Six	WWDSE in association with TAHAL Groups
Final Feasibility Report	Resettlement Plan	October, 2007	Six	WWDSE in association with TAHAL Groups
Final	Album of Drawings	December, 2008	Two	WWDSE in association with TAHAL Groups

2.3.7. Additional data, document and information collected by the AT fall into the following categories.

Report Stage	Report Type	Document Date	Volume	Prepared by
Final Report	Dam Detail Design	February, 2010	Four	WWDSE in association with TAHAL Groups
Recent Progress Report at this AT assignment	Progress Reports No.25 (Ribb Dam Construction Progress)	For the month of June, 2010.		WWDSE in association TAHAL Groups
	variations, payments, correspondence letters,	different		different
	Financial plan, work schedules	different		different

2.4. Description of the Project and Services

2.4.1. **Description**

Lake Tana Sub-Basin Surrounding Irrigation Project is one of the major projects financed by FDRE. The aim of the project is to increase irrigated agricultural output and productivity through developing 78,000 ha irrigable land within the sub-basin of the Blue Nile. The project consists about five dams named Gelgel Abaye I, Gelgel Abaye II, Megech, Ribb and Jemma dams. Currently, only Ribb dam is under construction with a contract price of 1.4 billion ETB. The construction process has been started following the completion of the feasibility study and the detail design work was underway in parallel to the construction. The Ministry has established project coordinating office for the coordination and monitoring activities.

Megech Dam

Megech dam site and reservoir area are located on the Megech River. The river stretches from the northern part of lake Tana sub basin up to the Lake and has a catchment area of approximately 700 km2. The river flows generally in a southern direction towards the Lake. The total irrigable land, located north of the Lake Tana, on the right and left banks of the Megech River, is close to 31,821 ha.

Ribb Dam

Ribb dam site and reservoir area is located in South Gonder Zone of Amhara National Regional State. The river stretches from the eastern part of Lake Tana sub basin up to the Lake and has a drainage area of about 1790 km^2. The river flows generally in a western direction towards Lake Tana. The dam has a capacity of 19,625 ha net Irrigable area.

Major components of the project includes:-

1. Main Dam
    - Earth-rock fill dam
    - 800m Crest length
    - 10m crest width
    - 73.2m dam height above the river bed level
    - 83.2m Dam height above general foundation level
    - 234 million m^3 reservoir capacity
2. Side spillway
    - 107m Effective crest length
    - Ogee weir type
3. Intake tower
    - 64.5m Height
4. Saddle dam -A
    - 620m length
    - 13.9m Maximum height
    - 10m crest width
5. Saddle dam –B
    - 275 m length
    - 12 m Crest width
6. Saddle dam-C
    - 203 m length
    - 12 m crest width
7. Upstream and downstream coffer dams
8. Irrigation out let conduit
9. Trunk bridge
10. Pedestrian bridge
11. Access road construction

Gelgel Abaye I Dam

The project area is located in the Gilgel Valley, between Wetet Abay and Lake Tana. It is located 1 to 1.5 km on the left side of the bridge on the Gilgel Abbay River on the way Durebete via Wetet Abbay road.

The total gross land to be irrigated from Gilgel Abbay I Dam, and by pumping from the station to be located at Chimba are 20,775 ha.

Gelgel Abaye II Dam

The project area is located in the Gilgel Valley, between Wetet Abay and Lake Tana. It is located 10 km from the junction of the road Durbate to Kunsila all weathered road, then to Debre Tsiyon church.

The total gross command areas, to be irrigated from Gilgel Abbay II Dam, and by pumping from the station to be located at Chimba, are 17,938 ha.

Jemma Dam

The Jemma gravity scheme is located in Amhara National Regional state, West Gojam Zone. It is located in the Gilgel Abbay Sub- Basin, near Wetet Abbay.

The project area considered for the present study has a total area of 7800 ha irrigable land.

2.4.2. **The Services**

1) Feasibility Study and Detail Design of five Dams:-

The employer is the Ministry of Water Resources MoWR), who entered into a contract with Water Works Design and Supervision Enterprise (WWDSE) of Ethiopia at a Lump-Sum contract price amounting 28,783,469.00 ETB with VAT. The scope of the service is the Feasibility Study and Detail Design of five Dams to irrigate about 78,000 ha command area:-

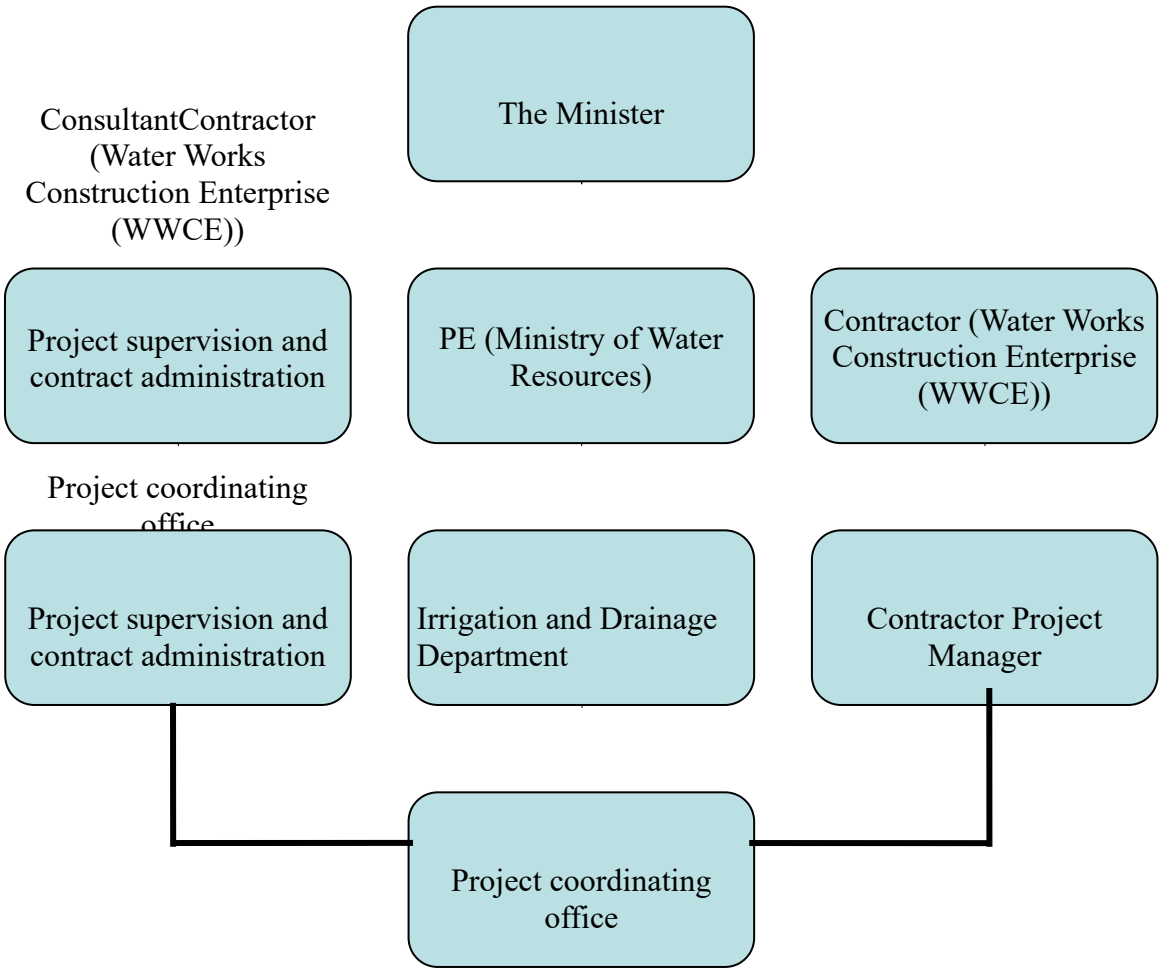
i. Gelgel Abaye I Dam
ii. Gelgel Abaye II Dam
iii. Megech Dam
iv. Ribb Dam and
v. Jemma Dam

The project coordinating office tries to assure the quality by reviewing and commenting the studied and design document.

2) Ribb Dam Construction

Ribb dam is one of the five dams in which the construction process is started. Hence, the assurance process is conducted only for this project. The irrigation command area is 20,000 ha. Ministry of Water Resources (MoWR) entered into a contract agreement with Water Works Construction Enterprise (WWCE) for the construction work with initial contract price amounting 1,336,274,358.08 ETB including VAT and Water Works Design and Supervision Enterprise (WWDSE) of Ethiopia for Contract Administration and Construction Supervision work with initial contract price amounting 12,310,452.29 ETB.

2.4.3. **Organizations Involved in the Project**



As we can see from the diagram, all the three parties the client, consultant and contractor are accounted for the Minister. However, the consultant and contractor are autonomous on their internal management system. The PE is coordinating and monitoring the project through the coordinating office under the Irrigation and Drainage Department. Overall management of the project was undertaken by the project coordinating office. The Ministry of Water Resources has appointed the

consultant to carryout the feasibility study, detail design, supervision and contract administration and the contractor to carryout the construction work.

This type of management type obviously will have a paramount disadvantage on the execution of the project with respect to accountability and transparency.

3. VERIFICATION AND ANALYSIS OF DOCUMENT

3.1. Ministry of Water Resources Procedures

The Ministry's procedures for awarding of contract slightly vary depending on the source of the fund. Here, the government funded project procedure is explained since the fund is from government source.

3.1.1. For most of such development projects, the first stage is to prioritize and select projects based on the merits from previously studied Master Plan study. Then, government decides the project to be carried out for the next step.

3.1.2. The Federal Democratic Republic Government of Ethiopia has Procurement Manual for public bodies to guide the tender process produced by Ministry of Finance and Economy Development (MoFED).

3.1.3. The manual describes the procedures for procuring services to be applied by all public sectors.

3.1.4. The MoWR submits the proposal of selected project to MoFED so that a budget might be approved for the execution. The proposal includes action plan and the corresponding budget for the annual target and the project period.

3.1.5. Following approval of the budget through MoFED, a decision comes to procure the consultant for feasibility study and detail design.

3.1.6. The approved methods of procurement that the public bodies can use include open tendering, two-stage tendering, request for proposals, restricted tendering, request for quotations, and single source procurement.

3.1.7. It is Government policy that public bodies shall undertake procurement of all items by open tendering unless there is a specific and good reason to use another method of procurement. Where there is a specific and good reason to use a method of procurement other than open tendering, public bodies should use the most appropriate method of procurement stated above.

3.1.8. Procurement of consultant services requires the preparation of terms of reference, explaining mainly the following:

- objectives
- scope of work
- methodology
- out puts.

3.1.9. Technical specifications form an essential part of bidding documents. They should be sufficiently detailed and comprehensive to:

i. encourage widespread competition,
ii. provide a strong basis for formulation of bids by interested suppliers and
iii. allow for the evaluation of bids.

3.1.10. Specifications will be used as a basis for examining the responsiveness of tenders. A bid which fails to meet the technical specifications, in any material respect, must be rejected.

3.1.11. Since the Ministry of Water Resources is one of the public / government organizations, it is governed by this procuring instructions and procedures.

3.2. Project Identification and Budget

3.2.1. For most of the water projects, the first stage is to prioritize and select projects from previously studied Master Plan study. Accordingly, this project is initiated from the Abay (Nile) Master Plan study since it is located within this basin.

3.2.2. The fund is from the Federal Democratic Republic Government of Ethiopia. No signed agreement was disclosed.

3.2.3. Based on the action plan proposed by the MoWR, the Ministry of Finance and Economy has already approved and secured a budget for the next budget year.

3.2.4. The Feasibility Study and Detail Design was signed on 7th February 2006 with initial price amounting 28,783,469.00 ETB including VAT for 12 months assignment with Water Works Design and Supervision Enterprise, WWDSE as a major consultant.

3.2.5. The feasibility report was prepared by WWDSE in association with TAHAL Groups. The major activities include:-

- Topographic Surveys
- Hydrological & Meteorological Study
- Geological & Geotechnical Study
- Dam, Reservoir & Apartment Structures Design
- Environment Impact Assessment Study
- Socio-Economic & Resettlement Planning Study
- Watershed Management Preparation

3.2.6. Based on the feasibility study, the engineering estimate of the Ribb dam project is detailed on the table below.

Part Nr.	Description	Amount (ETB)
1	General provision	5,041,365
2	Site Investigation	278,687
3	Site clearance and River Diversion	10,324,000
4	Saddle Dam and Cofferdam	29,546,760
5	Main Dam	570,492,930
6	Spillway	264,306,952
7	Intake Tower	33,018,280
8	Draw off Culvert	64,600,863
9	Downstream Works	3,651,285
10	Instrumentation	2,073,878
11	Hydro mechanical and Electrical Works	23,750,000
12	Access Road and Bridge	22,805,847
13	Project Manager's Requirements	6,516,894
14	Provisional sums	5,029,627
15	Day work	3,552,739
	Sub-Total	**1,044,990,105**
	Contingency (20%)	**208,998,021**
	VAT at 15%	**156,748,516**
	Grand Total	**1,410,736,642**

3.2.7. To allow some flexibility in case of significant unexpected problems, it is common to secure additional 10 % of the engineering estimate. However, the consultant seems uncertain in its preliminary design for that matter the contingency it has allowed is a bit exaggerated.

3.2.8. The time period forecast by this feasibility report for the Ribb dam construction is four years.

3.2.9. Having cross checked the information in the project documents with one another provided by the three contracting parties and based on discussions made with the project coordinator we conclude for the completeness, accuracy and to be latest version of the data.

3.3. Approach to Awarding Contracts

3.3.1. For this contract, both the Consultant and the Contractor were appointed using the single source procurement and request for proposal methods.

3.3.2. Both Consultant (Water Works Design and Supervision Enterprise, WWDSE) and the Contractor (Water Works Construction Enterprise, WWCE) are Government Enterprises.

3.3.3. Invitation was made to single source without competition for the corresponding activities. Both the consultant and the contractor were invited to submit their corresponding proposal. Accordingly, the consultant and the contractor submitted their technical proposals and financial offer. The Ministry gave comment on the proposals so that the firms might amend and come up with revised proposals. Following negotiation, agreement was signed.

3.3.4. The consultant, was appointed to carry out the following assignment:-

- Feasibility Study and Detail Design of five Dams to irrigate about 78,000 ha command area and
- Supervision and contract administration of Ribb and Megech dam construction.

3.3.5. The Contractor appointed to construct both the Ribb and Megech dam. Currently only Ribb dam project is under construction.

3.3.6. Conditions to use single source procurement method;

Public bodies may engage in single-source procurement when one of the following conditions applies where:-

- the goods, construction or services are available from a particular supplier, or a particular supplier has exclusive rights in respect of the goods or services, and no reasonable alternative or substitute exists;
- there is an urgent need for the goods or services, and engaging in tendering proceedings or any other method of procurement would therefore be impractical, provided that the circumstances giving rise to the urgency were neither foreseeable by the public body nor the result of dilatory conduct on its part;
- owing to a catastrophic event, there is an urgent need for the goods, construction or services, making it impractical to use other methods of procurement because of the time involved in using those methods;
- the public body seeks to enter into a contract with the supplier for the purpose of research, experiment, study or development, except where the contract includes the production of goods in quantities to establish their commercial viability or to recover research and development costs;

- spare parts are available only from the producer or supplier of the equipment.

3.3.7. The appointment of the consultant and contractor for this case do not satisfy the conditions and requirements set by the Ministry of Finance for single source procurement method. It is apparent that the use of single procurement method is neither effective nor efficient way of providing good value for money. By not seeking tenders from several suppliers, the Ministry lost the benefit of competition to identify the best supplier for the contracts. However, such procurement enables the client to settle disputes and differences amicably.

3.3.8. It is usual to notice excessive delay for these types of directly awarded projects which is also now happening for these cases. The follow up and the management of such government enterprise's awarded projects seem loose since all the three parties are governmental. The Minster can order all the three parties. Hence, we expect excuse and compromising on the quality and all the management of the construction activity. It will be difficult to the consultant to apply all the contractually agreed instructions, requirements and issues.

3.3.9. Standard Bidding Document (SBD) for Procurement, PPA (Public Procuring Agency) dated January 2006, is used for most of public procurement instructions and contract administration clauses. Usually, most clients adopt to build the following key controlling clause in the special conditions of work contracts:-

- The employer's specific approval of variations exceeding 10% of the contract amount and delay justification exceeding 25% of the contract time.

Such cost controlling clauses are not built in the special conditions of this contract.

3.3.10. This PPA (Public Procuring Agency) document is used by most of public organization for national level bidding. However, the Ministry of Water Resources used FIDIC for this contracts even if they are national level contracts. The other organizations use FIDIC for international level bidding. So, we recommend the Ministry of Water Resources to use the the said PPA document for national level projects. Because, there are special condition clauses required for specific national conditions.

3.3.11. The Initial Contract Prices, Scope and Programme

S. No.	Contract Type	Dates		Scope	Initial Price	Program
		Signed	Commencement			
1	Consultancy Service for Feasibility Study and Detail Design	Signed 7th February 2006	15 days after signing of the contract	Feasibility Study and Detail Design of five Dams to irrigate about 78,000 ha command area. The dams are:- 1.Gelgel Abaye I 2. Gelgel Abaye II 3. Megech 4. Ribb and 5. Jemma	28,783,469.00 (Twenty Eight Million Seventy Hundreds Eight Three Thousands Four Hundreds Sixty Nine) Birr Including VAT	12 months
2	Main Contract Agreement Civil Works Construction for Ribb Dam	Signed on 2nd October 2007	30 days after signing of the contract / but commenced on 2 March 200 EC	Ribb Dam Construction	1,336,274,358.08 (One billion three hundred thirty six million two hundred seventy four thousands three hundred fifty eight & eight cents) Birr with VAT; 1,161,977,702.68 Birr with out VAT	4 years but not filled on the Contract Agreement Document
3	Construction Administration and Supervision Service	Signed on 1st December 2007	Immediately signing of the contract	Construction Administration and Supervision of Ribb Dam Construction Project	12,310,452.29 (Twelve Million Three Hundred Ten Thousands Four Hundred Fifty Two & Twenty Nine Cents) Birr	Completion date is not filled on the agreement. But from Correspondence letter and Man-months it is 14 months.

3.4. Incentive Bonus and Liquidate Damage

3.4.1. There is no incentive bonus built in both contracts. It is not a nom to arrange incentive bonus in the Ministry's contract administration procedure.

3.4.2. However, there is liquidate damage amount built into the special conditions of work contract to be applied if the contractor delayed beyond the completion date due to his own default. The clause specifies 0.1 % price per day and the maximum amount of liquidate damage to be 10 % of the final contract price for the whole of the works. However, it is hardly possible to apply this liquidate damage cause for this type of contract due to all parties being governmental organization accounted to one Minister.

3.5. Consultancy Contract for Feasibility Study and Detail Design

3.5.1. ***The following documents have been provided in relation to the appointment of the consultant.***

S. No	The Availed Document Type	Source	Date	Remark
1	Consultant Technical Proposal	MoWR	November 2005	Water Works Design and Supervision Enterprise (WWDSE)
2	Consultant Financial Proposal for Feasibility Study and Detail Design	MoWR	January 2006	Water Works Design and Supervision Enterprise (WWDSE)
3	Consulting Service Contract Agreement for Feasibility study and Detail Design	MoWR, January 2006	Signed 7th February 2006	Ministry of Water Resources and Water Works Design and Supervision Enterprise (WWDSE)
4	Correspondence Letters	MoWR and Consultant	different	

3.5.2. The consultant, Water Works Design and Supervision Enterprise (WWDSE), was appointed to carry out the following assignment:-

- Feasibility Study and Detail Design of five Dams to irrigate about 78,000 ha command area and

3.5.3. The consultant was appointed using the single source procurement and request for proposal methods. Invitation was made to the consultant only. Accordingly, the consultant submitted its technical and financial proposal. The Ministry gave comment on the proposal. Following negotiation, agreement was signed.

3.5.4. The appointment of the consultant does not satisfy the conditions and requirements set by the Ministry of Finance and Economy Development for single source procurement method.

3.5.5. The consultant completed the assignment by March 2010 which implies delay of 3 years close to 300% of the initial contract period.

Document Submitted	Submitted Date			
	Megech	Jema	Gilgel Abay	Ribb
Vol. 1 -Tender Document	Feb 2009	Feb 2010	Feb 2010	Feb 2010
Vol.2 -Album of Drawing (Final Detail Design)	Jan 2010	Jan 2010	Jan 2010	Jan 2010
Vol. 2a -Hydro-Mechanical Album of Drawing	Jan 2010	Jan 2010	Jan 2010	Jan 2010
Vol. III -Technical Specification	Feb 2010	Feb 2010	Feb 2010	Feb 2010
Vol. IV -Bill of Quantity & List of Drawings	March 2009	March 2009	Feb 2010	Feb 2010
Vol. V -Final Detail Design Report	Feb 2010	Feb 2010	Feb 2010	Feb 2010
Vol. VA -Detail Hydro-Mechanical Report	Feb 2010	Feb 2010	Feb 2010	Feb 2010
Vol. VI –Final Detail Geological and Geo-technical Investigation	March 2010	March 2010	Feb 2010	March 2010

3.5.6. Individual Changes to the Contract which affect the Price, Programmes, Duration and Reasons for those Changes

No	Agreement Number	Date of Issue / Signed of	Reason for variation	Work required to implement the variation	Effect on cost	Effect on programme / time	Effect on quality
1.	**Amendment Contract Agreement No. 1**	31st March 2007	Schedule of payments Changed	N/A	N/A	N/A	N/A
2.	**Amendment Contract Agreement No. 2**	28th June 2007	Construction of access road and compensating of farmers of any damaged crops and trees while constructing of access road to carry out geotechnical investigation works (drilling works) required for the Original Services	Construction of access road and compensating of farmers	3,150,000.00 Birr (10.9 %); to be the total cost 31, 933,469.00 Birr Including VAT.	N/A	N/A

3.5.7. The assignment was controlled by the Ministry of Water Resources through the project coordinating office.

3.5.8. We are satisfied that the documents provided fully and accurately describe the appointment of the consultant, Water Works Design and Supervision Enterprise (WWDSE), for the Feasibility Study and Detail Design on this contract.

3.6. Main Contract Agreement Civil Works Construction for Ribb Dam

3.6.1. The following documents have been provided in relation to the appointment of contractor.

S. No	The Availed Document Type	Source	Date	Remark
1	Main Contract Agreement (Civil Works Construction for Ribb Dam)	MoWR	Signed on 2nd October 2007	Ministry of Water Resources and Water Works Construction Enterprise (WWCE). The contract completion time is not filled. Left black space.
2	Technical Specifications	MoWR	April, 2008	Water Works Design and Supervision Ent in association w... Sub Consultant:
2	Progress Reports No.25	MoWR	For the month of June, 2010.	
3	Correspondence letters	MoWR		
4	Payment certificates	MoWR		
5	Approved variations	MoWR		

3.6.2. The Contractor, Water Works Construction Enterprise (WWCE), is appointed to construct both the Ribb and Megech dam.

3.6.3. Currently, among the five dams in the Lake Basin Surrounding project, it is only Ribb dam project under construction.

3.6.4. The Contractor was appointed using the single source procurement method. Invitation was made to the contractor only. Accordingly, the contractor submitted its technical proposals and financial offer. The Ministry gave comment on the proposals. Following negotiation, agreement was signed.

3.6.5. Then contract agreement document for construction work prepared by the consultant and was signed by the client and contractor. Other documents are also available to identify the details of the contract. These documents are technical specification, Bill of quantities, works information, working drawing, general conditions (FIDIC), special condition of contract, and others.

3.6.6. For quality control, Technical Specifications document is prepared by the consultant.

3.6.7. The appointment of the contractor does not satisfy the conditions and requirements set by the Ministry of Finance and Economy Development for single source procurement method.

3.6.8. From the correspondence letters, we can see the contractor is not devoted to mobilize the contractually agreed resources like dump trucks.

3.6.9. The liquidate damage in respect of failure to meet the programme is 1/1000 of contract price per calendar day. Maximum limit of liquidate damage is limited to be 20 % of the contract price which is above the usual value 10%. However, it is hardly possible to apply the liquidate damage clause for this governmental construction enterprise. Therefore, there is no means of motivation to accomplish the project on time and within the budget. So, it is obvious to expect overrun both time and money.

3.6.10. However, the best advantage of such appointment to government enterprises is to resolve disputes and deviations easily by negotiation.

3.6.11. The basis of the contract is bill of quantity (BoQ) unit rate for payment. Under this agreement, the supplier is paid the construction cost of the work carried out which is equal to the quantity times the unit rate.

3.6.12. The critical activity of the construction is identified to be earthmoving elements of the dam. 12,000 m3 / day earthmoving works out put is the initial assumed performance.

3.6.13. The Federation International des Ingenieurs-Conseils (FIDIC) for works of civil engineering construction "4th edition, 1987 applied/used for conditions of this contract even if it is national level project. Most public organizations apply PPA document instead of FIDIC for national level projects.

3.6.14. Special condition of the contract 14(5) states the programme to be revised on monthly intervals and to include a chart of the principal quantities of work forecast for execution monthly. The AT team asked the PE and consultant if such monthly updates are possible to find. However, the AT team was unable to find such monthly revised programme.

3.6.15. Minimum amount of an interim certificate is specified to be 500,000 ETB.

3.6.16. Up to date, an amount of Gand Total amount of 1,336,274,358.08 ETB (9.07 %) payment effected.

3.6.17. The amount of variation to be approved by the consultant is not marginalized by building percentage clause in the special condition of contract. So, the PE has no means to control the maximum variation amount. This can cause big mess on the budget requirement. It should have been included not only the maximum variation percentage amount to be approved by the consultant solely but also the limit to be approved by the client itself. The Public Procurement Authority (PPA) requirement limits a maximum of 25% total variations to be approved by the

consultant and client. For variations greater than 25% of contract price, the client has to notify and get approval from the Ministry of Economy and Finance.

The directive says:

Public bodies may procure goods of the same type from the same supplier who recently won a tender contract within the previous 6 months. In such cases, the price of the goods may not change and the value of the goods should not be more than 25% of the original order. A follow up order may be placed provided that there is no other benefit in going through full tendering procedures.

3.6.18. To date, the approved variation amount is 24,255,394.76 including 15% VAT. However, the effect of the variation on the program/time was not requested by the contractor to be analyzed and approved by the consultant and client.

3.6.19. So far 75% of the initial contract period is elapsed and yet only 35% of the total target is achieved. This implies 40 % of the construction activity delayed. Only 1 year left to complete the contract period. Up to now, there is no approved extension of time for the delay.

3.6.20. The total cost incurred due to the addition of quantity varied from the BOQ amounts 24,255,394.76 ETB and the detail is shown belo.

i) Summary of Variation Order Records

Variation		Contract Amount (Birr)
Order No.	**Amount in (Birr)**	
Variation Order No.1	10,786,587.52	
Variation Order No.2	1,154,665.45	
Variation Order No.3	1,144,925.21	
Variation Order No.4	1,155,372.89	
Variation Order No.5	1,594,213.83	
Variation Order No.6	5,255,882.72	
Total sum of variation	24,255,394.76 with 15% VAT	1,336,274,358.08
Revised Total Project Cost	1,360,529,752.84	

ii) Variation Order Records

S. No	Variation Order No.	Date of issue of variation order	Reason for variation	Work required to implement the variation	Effect on cost Birr	Effect on programme / time	Effect on quality
1	1	14 AUG 2009	Additional Quantity Varied from BoQ At Saddle Dam & Coffer Dam • Excavation in rock for cut off trench to any depth At Main Dam • Excavation for cut off trench to any depth	 2,041.37 m^3 88,323.57 m^3	 253,129.88 2,561,383.53	Not attached with approved document	N/A

			• Excavation in rock for cut off trench to any depth • Common material excavation to any depth	58,171.77 m³ 27,343.23 m³ **Total**	7,213,299.48 758,774.63 **10,786,587.52**		
2	2	14 AUG 2009	Additional Quantity Varied from BoQ		**1,154,665.45**	Not attached	N/A
3	3	31 AUG	Additional Quantity Varied from BoQ At Saddle Dam A • Excavation for Embankment Foundation to max depth of 6.5m For Spillway • Strip top soil to a depth of 0.3m • Common Material Excavation to any depth for Spillway At Access Road • Masonry Side head wall to road culverts • Pointing to exposed faces of masonry head and wing walls to road culverts	10,093.81 m³ 3,378.09 m² 29,846.20 m³ 10.38 m³ 3.63 m² **Total**	278,084.33 33,780.93 828,232.08 4,773.42 54.45 **1,144,925.21**	Not attached	N/A
4	4	27 May 2010	Additional Quantity Varied from BoQ To Saddle Dam & Coffer Dam • Excavation for Embankment Foundation to max. depth of 6.5m	41,937,.31 m³	**1,155,372.89**	Not attached	N/A
5	5	07 July 2010	Additional Quantity Varied from BoQ		**1,594,213.83**		N/A
6		31 August 2009	Fuel Price Escalation		**2,088,783.56**	Not attached	N/A
7		9 December 2009	Fuel Price Escalation		**776,503.90**	Not attached	N/A
8	6	19 AUG 2010	Additional Quantity Draw of Culvert Excavation • Excavation Soft in open cut to any depth • Strip top soil to a depth of 0.3m • Common excavation in open cut to any depth • Excavation in rock for cut off	10,000 m³ 3,500 m³ 19,000 m³	440,000.00 70,000.00 551,000.00		N/A

			trench to any depth	33,828.28 m^3	4,194,707.72		
				Total	**5,255,882.72**		

3.7. Contract Administration and Supervision Service- Water Works Design and Supervision Enterprise (WWDSE)

3.7.1. Water Works Design and Supervision Enterprise (WWDSE) was appointed for Construction Administration and Supervision Service following its previous work on the feasibility study and detail design. A contract agreement was signed on 1st December 2007 with initial price amounting 12,310,452.29 ETB and the initial contract period was 14 months.

3.7.2. Using the same consultant for the Contract Administration and Supervision Service role has a clear advantage, in that knowledge and understanding of the scheme are retained. But also has a disadvantage to sort out variations due to the design defaults.

3.7.3. The assignment is controlled by the Ministry of Water Resources through the project coordinating office.

3.7.4. We are satisfied that the documents disclosed fully and accurately describe the appointment of the consultant.

3.7.5. However, the appointment of the consultant does not satisfy the conditions and requirements set for single source supplier procuring method. So, the award of this contract is not procedural to the conditions and instructions set by the Ministry of Finance and Economic Development.

3.7.6. Up to now, both the price and the time period have increased to 40,200,264.92 ETB and 43 months respectively. This contract is extending every year since the PE is not sure when the construction work would be completed.

i) Variation Order Records

S. No	Agreement Number	Date of Issue / Signed of	Reason for variation	Work required to implement the variation	Effect on cost	Effect on programme / time	Effect on quality
1	Amendment Contract Agreement No. 1	1st February 2009	Original Contract Agreement signed on 1st December 2007 expired on 31st of January 2009	To extend the same assignment until 30th of June 2010 (17 months)	13,734,130.28 Birr (111.6 %); to be the total amount 26,044,582.57 Birr	extend the same assignment until 30th of June 2010 (17 months)	N/A
2	Amendment Contract Agreement No. 02	July, 2010	Amendment Contract Agreement No. 1 signed on 1st February 2009 expired on 30th of	To extend the same assignment until 30th of June 2011 (12	Under Negotiation (The Consultant offered 14,155,682.35 Birr including 15%	extend the same assignment until 30th of June 2011	N/A

			June 2010	months)	VAT) total amount to be 40,200,264.92 Birr	(12 months)	

ii) Summary of Payment Records for the Construction Administration and Supervision Service

Payment Number	Amount Birr	Date Birr	Total to date Birr
29	272,078.50	9 June 2010	26,044,582.57

3.8. Summary of Tender and Award

Tender process (project design)	Tender procedure	Single source award
	Number expressing interest	Single source award
	Number short listed	Single source award
	Number submitting tender	one
	List of tenderers	Water Works Design and Supervision Enterprise (WWDSE) in association with TAHAL Group
	Tender evaluation report	N/A; only comments to the proposal
Tender process (contract for project supervision)	Tender procedure	Single source award
	Number expressing interest	Single source award
	Number short listed	Single source award
	Number submitting tender	one
	List of tenderers	Water Works Design and Supervision Enterprise (WWDSE)
	Tender evaluation report	N/A; only comments to the proposal
Tender process (main contract for works)	Tender procedure	Single source award
	Number expressing interest	Single source award
	Number shortlisted	Single source award
	Number submitting tender	Single source award
	List of tenderers	Water Works Construction Enterprise (WWCE)
	Tender evaluation report	N/A; only comments to the proposal

Contract award (project design)	Name of main consultant	Water Works Design and Supervision Enterprise (WWDSE)
	Contract price	28,783,469.00 (Twenty Eight Million Seventy Hundreds Eight Three Thousands Four Hundreds Sixty Nine) Birr Including VAT
	Contract scope of work	Feasibility Study and Detail Design of five Dams:- 1.Gelgel Abaye I Dam 2. Gelgel Abaye II Dam 3. Megech Dam 4. Rebe Dam 5. Jemma Dam
	Contract programme	12 months
Contract award (project supervision)	Name of main consultant	Water Works Design and Supervision Enterprise (WWDSE)
	Contract price	12,310,452.29 (Twelve Million Three Hundred Ten Thousands Four Hundred Fifty Two & Twenty Nine Cents) Birr
	Contract scope of work	Construction Administration and Supervision of Ribb Dam Construction Project
	Contract programme	14 months
Contract award (main contract for works)	Name of main contractor	Water Works Construction Enterprise (WWCE)
	Contract price	1,336,274,358.08 (One billion three hundred thirty six million two hundred seventy four thousands three hundred fifty eight & eight cents) Birr
	Contract scope of work	Construction Of Ribb Dam includes:- • A main dam 800m long, 73.3m high above the river bed level (83.3m above general foundation level); • A saddle dam, 629 m long, 18 m maximum height, is closing a topographic depression on the ridge. There are other small saddle dams; Saddle Dam B and Saddle Dam C closing ridge depression. Saddle dam B is 295 m long and about 2.2 m high. Saddle dam C, 203 m long with same height to Saddle dam B. • A reservoir impounding about 234 million m^3 of water • A side channel spillway, required for the safe passage of 1-day ½ PMF flood discharge of 1,060 m3/s; and • An outlet pipe, to release water from the reservoir back to the river course, for downstream environmental releases, and subsequent diversion to the 19,925 ha irrigable area.

	Contract programme	4 years

3.9. Summary of Findings

3.9.1. The Consultant and the Contractor involved in the implementation of the project were appointed using a single source procurement and request for proposal methods. Both the consultant (Water Works Design and Supervision Enterprise, WWDSE) and the contractor (Water Works Construction Enterprise, WWCE) were invited to submit their proposal with respect to the job assignment concerned. Accordingly, the consultant and the contractor submitted their technical proposals and financial offers. The Ministry gave comment on the proposals so that the firms might amend and come up with revised proposals. Following negotiation, agreement was signed. Both the consultant and the contractor employed for the said works are government owned enterprises.

3.9.2. Government policy directs public bodies shall undertake procurement of all items by open tendering unless there is a specific and good reason to use another method of procurement. Hence, it is clear that the appointment of the consultant and contractor for this case do not satisfy the conditions and requirements set by the Ministry of Finance for single source procurement method.

3.9.3. It is apparent that the use of single procurement method is neither effective nor efficient way of providing good value for money. By not seeking tenders from several suppliers, the Ministry lost the benefit of competition to identify the best supplier for the contracts. However, such procurement enables the client to settle disputes and differences amicably.

3.9.4. The Feasibility Study and Detail Design of the five Dams have been completed by March 2010. However, a delay of 3 years close to 300% of the initial contract period has been recorded.

3.9.5. Up to July 2010, three fourth (75%) of the Ribb dam construction period is elapsed. It is only one year left to finish the contractual period. However, so far the accomplishment is estimated 35% of the project which implies 40 % delay.

3.9.6. The amount of variation to be approved by the consultant is not marginalized by building percentage clause in the special condition of works contract. So, the PE has no means to control the maximum variation amount. This can cause big mess on the budget requirement. It should have been included not only the maximum variation percentage amount to be

approved by the consultant solely but also the limit to be approved by the client itself. The Public Procurement Authority (PPA) requirement limits a maximum of 25% total variations to be approved by the consultant and client. For variations greater than 25% of contract price, the client has to notify and get approval from the Ministry of Economy and Finance.

3.9.7. To date, the approved construction variation amount is 24,255,394.76 including 15% VAT. However, the effect of the variation on the program/time was not requested by the contractor to be analyzed and approved by the consultant and client.

3.9.8. Up to now, both the price and the time period have increased to 40,200,264.92 ETB and 43 months respectively. This contract is extending every year since the PE is not sure when the construction work would be completed.

3.9.9. If conditions persist / continue on the current progress, the 4 years construction activity will take how many years?

3.10. Recommendations

3.10.1. It may be good to apply the Government procurement policy in order to achieve better value for money.

3.10.2. We recommend the MoWR to use the PPA contract document for national level projects instead of FIDIC since there are built in special clauses required for specific national conditions.

3.10.3. For the successful accomplishment of the intended target, the MoWR should strengthen the Project Coordination Unit. The contractor should discharge its contractual obligation fully specially by mobilizing professionals and construction resources as per the contract agreement.

3.11. Main Correspondence Letters Summary

S. No.	Date	Reference No.	Written by / to	Required Subject/concern	Written in Response to	Remark
1	26/03/2001 EC	¬7/04/72	Contractor to Client	Unable to schedule due to lack of completed drawings	Client letter dated 18/03/2001 and R. No. ¬J/237/22/005	The Consultant is responsible
2	8/10/2001 EC	¬J/237/22/159	Client to Contractor	The construction performance was late • Dam foundation excavation completed only 30% of plan • Tower pile foundation & conduit not completed • Spillway completed only 14% of plan • Grouting not started according to plan • Saddle dam excavation not still completed		• Dump truck Plan = 40 Functional = 15 • Lack of Water pump to dewater 400,000m3 • Lack of fuel • Shortage of excavator
3	16 March 2010	WWD127.1/141/10	Consultant to Contractor	Executed works not achieved even 25% of the total work since construction commencement; to take prompt action.		
4	15 March 2010	WWD127.1/123/10	Consultant to Contractor	To uphold the required number of equipment as per the schedule		
5	31/07/2009	WP104/	Contractor to Consultant	2002 E. C Work Schedule		

6	12/4/2001 EC	¬J/237/22/23	Client to Consultant	To finalize working drawings within one week and submit to Contractor		

Annexes

Annex 1 – List of Material Project Information

Annex 2 – Summary of Payment Records for the Main Contract Agreement (Civil Works Construction for Ribb Dam)

Annex 1 – Core List Material Project Information to be Disclosed and Possible Causes for Concern

Stage in Project Cycle	Initial List of Disclosures	Additional Disclosures	Possible Causes for Concern
Project identification	Project purpose	To sustainably increase agricultural output and productivity in project areas. Increase in quantities of major products marketed by farmers as well as in value added per unit area and worker.	
	Location	Amhara National Regional State; Lake Tana Basin Surrounding	
	Intended Beneficiaries	Local farmers	
	Specification	Construction of five dams and irrigation development of 78,000 ha irrigable land. 1.Gelgel Abaye I Dam 2. Gelgel Abaye II Dam 3. Megech Dam 4. Ribb Dam and 5. Jemma Dam	
Funding	Budget	1.4 billion Birr only for Ribb dam construction	The availability of funding for the project is not clear and every year a budget is requested from Government treasury
	Quantity Survey's (QS's) estimate	1,336,274,358.08 Birr Including 15 % VAT	
Tender process (project supervision)	Tender procedure	Water Works Design and Supervision Enterprise (WWDSE) appointed for Construction management and supervision following their previous work on the feasibility study and final design	Apparent deviations from procurement policy directives and not explained at all why a single procurement method was taken as a choice.
	Name of main consultant	Water Works Design and Supervision Enterprise (WWDSE)	
Tender process (project management)	Tender procedure	One source invitation/ award	Apparent deviations from procurement policy directives and not explained at all why a single procurement method was taken as a choice.
	Number expressing interest	N/A	
	Number short listed	N/A	
	Number submitting	1	

	tender		
Tender process (main contract for works)	Tender procedure	One source invitation/ award	Apparent deviations from procurement policy directives and not explained at all why a single procurement method was taken as a choice.
	Number expressing interest	N/A	
	List of tenderers	Water Works Construction Enterprise (WWCE)	
	Number shortlisted	N/A	
	Number submitting tender	1	
Contract award (project supervision and project management)	Name of main consultant	Water Works Design and Supervision Enterprise (WWDSE)	
	Contract price	12,310,452.29 Birr	
	Contract scope of work	Construction administration and supervision	
	Contract programme	1st December 2007 to 31st of January 2009	
Contract award (main contract for works)	Name of main contractor	Water Works Construction Enterprise (WWCE)	
	Contract price	1,336,274,358.08 Birr including 15% VAT	
	Contract scope of work	Construction of Ribb Dam	
	Contract programme	4 years (November 2007 to October 2011) _according to contract agreement	
Contract Execution (project management and supervision)	Changes to contract price, programme, scope with reasons	Contract price increased to 40,200,264.92 Birr; Programme duration extended to extend the same assignment until 30th of June 2011	Varied activities time extension neither proposed nor approval issued. In no document the extension of time is justified.
Contract Execution (Main contract for works)	Individual changes to the contract which affect the price with reasons	Contract price increased to 1,360,529,752.84 Birr up to now resulting from 6 Additional Quantity Varied from BoQ	The contractor should obey the contractual agreements by mobilize construction resources as per the agreement.
	VO's, claims, Early Warnings & Compensation Events	6 variation orders approved and delay notices issued	Varied activities time extension not proposed. Varied activities should be contractually justified and

			analyzed both in terms of money and time.
	Payment certificates	14 payment certificates issued, advance and loan also paid	
	Details of any re-award of main contract	None	
Post contract completion details (main contract for works)	Actual contract price	Final target price £2,711,316 plus share of saving on budget	
		Not yet completed; 75 % contract time completed but only about 35 % of the work executed.	

Annex 2 – Summary of Payment Records for the Main Contract Agreement (Civil Works Construction for Ribb Dam)

S. No.	Payment Description	Requested Birr	Net Paid Birr	Cumulative Grand Total Paid Birr	Effected Date	Remark
1	Advance	232,395,540.4	201,273,500.00		6/32000 EC up to 18 Aug 2009	
			31,000,000.00		9 December 2009	
2	Loan	145,000,000.00	145,000,000.00		9 December 2009	Due to financial constraint of the Contractor
3	Advance	22,723,641.00	22,723,641.00		14 May 2010	For sub-contracting of the foundation drilling and grouting works to China Jiangxi Corporation
		426,426,745.37	80,000,000.00		03 June 2010	Due to financial constraint of the Contractor
4	PC No. 01		2,882,667.64		12 January 2009	
5	PC No. 02		4,229,260.85		6 February 2009	
6	PC No. 03		9,129,350.81		24 March 2009	
7	PC No. 04		7,938,861.51		30 April 2009	
8	PC No. 05		15,717,096.54		14 August 2009	
9	PC No. 06		8,562,922.92		14 August 2009	
10	PC No. 07		1,030,432.69		31 August 2009	
11	PC No. 08		8,673,135.73		23 September 2009	
12	PC No. 09		5,116,334.09		30 November 2009	
13	PC No. 10		7,969,377.66		05 January 2010	
14	PC No. 11		9,715,920.86		3 March 2010	
15	PC No. 12		5,779,500.76		6 May 2010	
16	PC No. 13		5,090,366.00		14 June 2010	
17	PC No. 14		13,884,494.18	121,193,084.33	24 June 2010	

PROJECT NAME	TEAM LEADER	TEAM MEMBER
Lake Tana Sub-Basin Projects	BERHANU ALEMSEGED	TESEMA HABTE
		October 2010