1 Executive Summary

1.1.1 Kessem Dam and Irrigation project is one of the few mega projects in the water resources development programme financed by the Government of Ethiopia. The purpose of the programme is to increase agricultural productivity, with further focus on production of white raw sugar on 20,000 to 30,000 ha land for domestic and foreign market. The project involves constructing a dam height of 90m and crest length 714m having a reservoir area of close to 4km^2 with water storing capacity more than 500 million m^3, saddle dam, spillway, intake, diversion tunnel, canal and development of irrigable land. The project is found in the Afar Regional State in Awash basin.

1.1.2 The consultants and contractors undertaking the assignment for this project were appointed without inviting potential firms to participate in the competition. Both the WWCE and WWDSE were assigned to carry out the construction and the design work respectively. Dated August 03, 2004 a letter of appointment was issued from the Ministry of Water Resources emphasising that WWDSE was suppose to handle the design work on a phased approach and WWCE to make whatever arrangement for the implementation work in parallel. On the same letter it was also stated that agreements ought to be signed in a week time. It is important to note that both the consultant and the contractor are state owned enterprises.

1.1.3 Following the letter of instruction an agreement for the implementation of the project was signed on August 2004 in between the client and the contractor at a contract cost of ETB 829,745,725.00. The contractor was supposed to complete the assignment within twenty two months at least by year 2007. However, the construction process is delayed significantly due to various factors among which construction difficulties can be mentioned. According to the forecast by the MoWR the project cost is estimated to double or approach to 2 billion and the contractor is expected to complete the remaining works within the coming twelve months.

1.1.4 Concurrently an agreement was entered by both parties for the detail design work and supervision at a contract cost of ETB 9,160,495.78 and ETB 8,852,079.00 respectively. The consultant was delayed by four months (50% of the initial contract period) to finish and issue the final design report. Due to the impact of the construction process also the supervision work is delayed to a large extent.

1.1.5 The MoWR initiated the implementation phase before the detail design was completed. Though the Ministry of Water Resources has the required technical capacity to manage the overall implementation of the programme, the project suffers cost overrun and delay in completion due to the procedural failure to commence the construction work. Such discrepancies could have been avoided if the detail design had been completed by then & a design review be conducted before the implementation process took place.

1.1.6 The implementation process was commenced based on the feasibility study made in 1987. While the construction process was under way the consultant was engaged in parallel to conduct the detail design work. This approach was at the expense of quality and cost of the project. For this reason the completion of the project is extended significantly, so far the total time elapsed since the effective date is seventy four months close to 400% of the initial schedule and yet the work progress so far is less than 70%. From this we can conclude that the project is subjected to both time and cost overruns.

1.1.7 Contracts with consultants and contractors including the form of agreement and the general conditions of contract are based on the standard contract documents provided by the International Federation of Consulting Engineers (FIDIC). However, the procurement process didn't comply with the policy directives issued by MoFED and the Public Procurement Agency. The Ministry of Water Resources manage the overall execution of the project partly in accordance with the requirements of these contracts.

1.1.8 The client preferred to mutually bear the responsibility of the project implementation and there seems no way to challenge the contractor & supervising consultant so to complete the project within a given time boundary. So far no strict instructions or warnings are given by the PE for the delays due to inefficiency.

1.1.9 A number of variations due to design amendments as well as the construction difficulties are the apparent factors for the delays. Moreover poor project management of the contractor as well as poor contract administration and supervision by the consultant are also major factors for the delays.

1.1.10 To ensure the quality of work the supervising consultant has deployed its skilled manpower and equipment the nature of the job may require. From the records it could be learnt that material and quality inspection certifying statements have been made properly where needed. No matter what, it is beyond the scope of this study to provide a sound testimony on how well this quality assurance task has been done.

1.1.11 Variation orders prevailed can be classified as changes to the quantities of any item of work included in the BOQ, addition of new item of work, deletion of work and increasing working hours (over time commitment). So far the cost incurred due to variation accounts 16% of the initial contract price amounting ETB 131,227,079.85 and the price adjustment made for construction materials accounts 11.5% of the initial contract price amounting ETB 95,542,720.83.