

Hope in the making

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As one of the most discussed issues in our country these days, the grand renaissance dam has enjoyed wide media coverage. Both the electronic and print media in our country have repeatedly addressed facts and rumors related with the construction of the dam. I, as the rest of the audience, have always wanted to have a more vivid idea of how far the construction has gone and what the place is generally like.

In that respect, last week was very special to me as I finally got the opportunity to visit it. Understandably, my friends envied me as that is something most of us want to happen to us. However, as they were not coming along with me on the work trip, they asked, if not warned, me to get as much information as I can about the progress when I got back. Considering the request could apply to a lot more people other than my friends, I have decided to put what I have learned about the grand renaissance dam from my stay there into an article.

Let me skip the two days delightful road trip on the way to the grand renaissance dam and cut to the chase. But just before I embark on to the main issue, I want to point out that we have seen a number of Abay tributaries. Some of these rivers are big while some are small in this dry season. These rivers are located in Amhara, Benshangul

Gumuz and Oromia regional states. Some of the big names include: Jema, Yida-Chemoga, Temcha, Gilgel Beles, Dabus, Dedessa, Fincha and Guder.

It was dusk when we got to the dam. The first thing we noticed as we went into the compound was the flood lights used to assist vision in the night shift. A few minutes later, we saw a number of machines and people going about their work oblivious to our presence and the first impression they have given us. As soon as we stepped out of our air conditioned cars, however, we noticed that the weather was still hot despite the fact that darkness has taken its turn for quite a while. Then we were greeted by the staff and allotted guest rooms. After discussions over dinner with our hosts, we decided to start our work the next day as we had a long drive. Then we retired for the night.

We had a briefing the next morning by non other than Semegnehu Bekele – the project manager. He explained that the government has clearly identified capacity building and employment as the main issues to be addressed in constructing the dam. Accordingly, there are about 5,000 employees with more than 1,200 machineries operating on the project site. With companies like Metech involved in metal works and engineering, the capacity of manufacturing firms is having a good opportunity to grow itself. The presence of 5,000 employees also entails that there be a huge number of workers' houses built nearby. In line with that, we have witnessed a large number of them already serving their purposes or under construction. Considering the construction is, according to Semegnehu Bekele, 15% into the plan, there is going to be a lot more opportunities for manufacturing firms to puff up their muscles through participation in it.

He assured everyone that the dam has been planned and built by world class consultants and engineers. The project benefits from French and Italian consultants while Salini is the contractor. The design was made by the Italian company Studio Petrangeli, which has 198 dam designs in the world to its credit including the Legedadi

dam in our country. With Metech handling the electro and hydro mechanical sides of the project, the project in all cross sections enjoys the expertise of world class competent professionals.

The renaissance dam is going to stand between two mountains located, as stated earlier, in Sirbaba and Guba woredas as Abay (the Blue Nile) flows in the low land between the two mountains. The dam is going to connect the two mountains forming an artificial barrier with a length of 1780m and a height of 145m. The dam would have a thickness of 125m at the base going slimmer all the way to the top where its thickness gets just 8 meters.

Just to paint a layman's image of the progress made, the place where the dam is going



to stand is being dug and blown up with dynamite.

A dynamite explosion in what is going to be the foundation of the dam

That entails a number of huge dump trucks and excavators operated and aided by yet a much larger number of people

swarming the area. All that commotion compounded by big boring machines protruding out of a vehicle kept in balance by metal stands prove to be very noisy and industrial. A short and precise professional expression of the whole commotion was that they were working on the foundation.

When the project started, one had to drive 80kms of rough road just to cross from Guba to Sirbaba even though people on either side of the river could have been able to have a

conversation. Nowadays, a 100m long enormous bridge that took only a year to build has made things as easy as can be. Various constructions related materials and vehicles are now easily transported from one side of the river to the other.

A complex of machines used to produce the concrete needed to build the dam is also built and operational. The grand renaissance dam is what is called a roller compacted concrete (RCC) dam. That means the dam is going to be built out of concrete instead of being rock filled for instance. As mentioned earlier, the dam has a width of 125 meters at its bottom and just 8 meters at the top. Building a structure that big is going to require lots of concrete, which will be produced and availed by the RCC machine in the project site.



The Roller Compacted Concrete (RCC) complex
The start of April is going to mark the second anniversary of the renaissance dam which is located between Guba and Sirbaba woredas at an

altitude of 500m above sea level. The dam is only 20kms from the Ethio-Sudanese border. On completion, the dam is expected to be the biggest in Africa and seventh biggest in the world. The dam will be fitted with sixteen turbines, ten on the left and 6 on the right, and each with a capacity of generating 375 MW of electricity. The total amount of electricity generated from all the generators would, therefore, be 6,000 MW. The lake formed behind the dam is expected to be 246km on its longest side covering a total area of 1680km². The lake would have a water storing capacity of 84 billion cubic

liters, which is twice the amount of water in Lake Tana. The area covered by the lake would, however, not be bigger than that of Lake Tana.

One thing we noticed during our stay in the project site was that there was a round the clock dust cloud engulfing and going past the site. The project manager, Semegnehu Bekele, explained that it is sand brought by wind from the Sahara desert. That got me thinking about how near the Sahara desert is finally getting after years of expansion. After years of talks on desertification, the Sahara is eventually within spitting distance of our country.

The creation of a huge lake in that area within just a few years could, however, help check the exacerbation of the problem by bringing in moist air into what is now a dry current. The effects of such a climate change could also be felt in down stream countries, changing the climate of the basin for the better. As Engineer Semegenhu put it in general, environmental protection and the preservation of the eco-system in both our country and lower riparian countries have been taken into consideration.

In economic terms, at least for our country, the huge lake that will be formed will be used for fishing and tourism. As the tourist attraction potential of the lake is so immense, the future looks bright for the sector. In addition, the area is planned to be a hub for hydrologists and a training centre for professionals in water related disciplines from in and out of the country.

Finally, I have to say that the progress of the project is one we all want to follow up. With that in mind, I would ask anyone else out there who has read my account of my visit to the Grand Ethiopian Renaissance Dam to depict their report on how the project is progressing whenever they stumble on to a chance like mine. That chance might come sooner than you think considering 15-20 thousand people have already visited the project. Till then, hope to see your hope in the making.