

Rambukkan Oya Reservoir

Will provide water for agricultural and infrastructure development

G. T. Dharmasena

DEVELOPMENT: Ampara & Batticaloa will see vast development with the launching of the work on the Rambukkan Oya reservoir which begin today.

This planned reservoir by the Department of Irrigation brings benefits to both Ampara and Batticaloa Districts by providing much needed water for the development of 2000 ha of arid lands in addition to the drinking water and other infrastructure development. The cost of the project is Rs. 2500 m. and funds have been provided by the Treasury to commence work during this year. This intended project will be completed within 3 years according to the officials.

Soon after the laying of foundation for the gigantic Moragahakanda reservoir in the Mahaweli basin in January, laying of the foundation for a major irrigation project can be seen as a significant and historic event. The both events can be regarded as a strategy to end the prevailing unrest in the Northern and Eastern regions by delivering the undeveloped water resources in the region for economic development.

It is strongly believed that the prevailing internal unrest in the North and East during the last two decades can be successfully resolved with the devolution of political power and providing equitable resource distribution such as water. The Jaffna city, the second largest city of Ceylon in the 1950's is quite a different proposition today with not more than 500,000 people, completely locked without ground access to the rest of the country.

The shortage of natural resources such as water in the North Eastern region and the non availability of job opportunities for the Tamils to be engaged in economic activities in those areas can be seen as one of the roots of today's problem. This situation compelled them to leave the North, seeking employment in Colombo and abroad.

At the commencement of the construction work at Moragahakanda a few weeks back, the President stated that the regulated water at Moragahakanda reservoir will not only contribute for the economic development, but extinguish the flames of the prevailing war in the North. He added the Moragahakanda water will be conveyed to Iranamadu via the NCP canal as proposed in the original UNDP master plan.

If this situation is rectified by the Government with other vital inputs with adequate infrastructure facilities, more job opportunities will be created in the North and East and thereby the economic disparity between the two major communities can be minimised.

With that in mind the writer of this article is making an attempt to focus on the possible development of the infrastructure with the water resources development in the North and East as a pre requisite to end the war.

The possible surface water resources development in the North Eastern Province, which includes the potential development of Heda Oya, Mundeni Aru, Maduru Oya, Yan Oya, Kanakarayan Aru and Malwatu Oya river basins.

Moragahakanda Reservoir

Under the original UNDP master plan of 1968, five major reservoirs

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AGRICULTURE: The water from Rambukkan Oya will be a boon for agriculture

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were proposed and the Kotmale, Victoria, Randenigala and Rantambe reservoirs have been completed. The fifth major reservoir yet to be constructed is Moragahakanda, which is across the Amban Ganga, a major tributary of Mahaweli Ganga.

The original UNDP master plan envisaged to convey Moragahakanda water through a ridge canal called the NCP canal to the North Central Province and goes beyond the Vavuniya district and entered Kanagaran Aru in Kilinochchi district to feed the Iranamadu Tank. This NCP canal will feed almost all the existing reservoirs and river basins in the region including Wahalkada Wewa, Padaviya on the right bank of the proposed canal and Malwatu Oya, Parangi Aru and Vavnikulam on the left bank. The original master plan of Mahaweli river basin development covered 14 systems namely A,B,C,D-1,D-2,E,F,G, H,I,L,M,K,J and irrigating 188,000 ha in the Mahaweli basin and Maduru Oya basin. Systems I,J,K,L and M were not developed as a result of not completing the Moragahakanda reservoir and the NCP canal. However regarding the viability of the NCP canal as proposed in the original master plan,

there are some concerns by the professionals and these concerns have to be discussed and resolved.

The objective of the Moragahakanda development should not be viewed as to increase the cropping intensity of lands already developed under the same Mahaweli project. By considering the unattended original target areas of the Mahaweli development programme a serious consideration has to be given to achieve a uniform intensity of development in the region by looking at the systems I,J,K,L and M. It is also important to highlight the fact that this is in line with the vision for next 10 year under the Government policy document, *Mahindha Chintana* to reconsider the NCP canal.

Mundeni Aru River Basin

The formulation of development plans for the Mundeni Aru basin was commenced in the early 1970s, but none of these plans was implemented during the last 35 years. The Mundeni Aru basin in which Rambukkan Oya reservoir is located is numbered as river basin no. 52 and located in the Ampara and Batticaloa Districts in the East-

ern Province. This is a rural undeveloped basin with a catchment area of 1,280 km² and annual discharge to the sea is estimated as 757.0 mcm. The annual average rainfall in the basin is 1726 mm with unimodal distribution and heavily influenced by the North East monsoon.

The irrigation sector is the prominent water user in the basin, but closer to the river estuary in the coastal area of Batticaloa, the demand for drinking and industrial water is increasing. In addition even for the cultivation of paddy, there is a severe shortage of water during the Yala season and therefore the full extent of cultivable lands cannot be asvaddumized. As the water resources of the basin are not fully developed, it is possible to develop the water resources of the basin in an integrated manner to meet the water demands of different sectors. There is an ongoing World Bank project to rehabilitate Rugam, the major irrigation system already developed in this basin more than 150 years back for better water efficiency. The conflict between water demand and supply and the conflict between water sectors has become a severe constraint especially during the Yala

season. The Mundeni Aru basin has no reservoirs across the main stream. The only major reservoir in the basin is Rugam and it is not across the main Mundeni Aru. One of the major problems in the lower basin of Mundeni Aru is flooding in addition to the water shortage during the dry seasons. The Mundeni Aru in the upper reaches consists of three major tributaries located in the Ampara district. They are Rambaken Oya, Maha Oya and Gallodai Aru.

There are three potential reservoir sites available across these tributaries to regulate the large amount of water now escaping to the sea. If all these three dams are constructed it would benefit about 6000 ha of lands. Such regulation of water also prevents the flooding of the downstream valley in the Batticaloa District.

Rambukkan Oya reservoir

This reservoir project is located in the Maha Oya Divisional Secretary's Division in the Ampara District and the proposed dam is 1100 m. in length. The remnants of the ancient tank can be seen at Kuruduwinna village. The total estimated cost of the project is Rs.

2500 m and Rs. 1750 m will be for irrigation infrastructure and the balance Rs. 750 m will be spent for other infrastructure facilities such as school, hospitals, roads and drinking water.

About 2500 families will be benefited from the reservoir once constructed. The Rambukkan Oya reservoir has the capacity of 56.0 mcm and the potential of providing irrigation facilities for 2,000 ha. of farmland. The remarkable feature of this project is the integrated approach in the development of water resources by providing the other non irrigation infrastructure facilities. These include,

i. Provision of Rs. 165 m. for drinking water supply for 32,000 people,

ii. Improving marketing facilities, iii. Provision of additional building facilities for the Divisional Secretary's office, iv. Provision of health facilities to Maha Oya hospital, v. Building facilities for schools,

vi. Facilities for agricultural extension works including livestock. The construction of Rambukkan Oya reservoir should be only a beginning of a process and not an end.

There are two more major reservoir sites identified for investigation and a brief account of those two is given below.

a. Maha Oya reservoir:

The proposed reservoir across the Maha Oya and development area is located on the right bank of the Maha Oya.

A command area of about 1280 ha. has been identified for development of under irrigated agriculture. The proposed reservoir will have the capacity of 84.0 mcm. with a provision for detaining floods. The area under development is mostly jungle areas and a few people are engaged in occasional cultivation for their livelihood.

b. Gallodai Aru reservoir:

The proposed development area of 2000 ha is located on the left bank of the Gallodai Aru. The proposed reservoir has the capacity of 96.0 mcm. The area is mostly covered in jungle with a few small village tanks for paddy cultivation.

In conclusion this article highlighted the available potential at four major water river basins in the Eastern Province and two major river basins in the Northern Province. The development of water resources in these basins have to be conceptualized deviating from the traditional narrow sectoral approach.

Therefore these water resource projects have to be multi functional by providing water for drinking, hydro power, industries and environmental purposes, while assuring much needed agricultural water for food production. These aspects have been recognised by the Irrigation Department to make projects more economically viable.

Therefore focus of the new Irrigation and Water Management Minister and his top officials should be to draw up plans for the water resources development in the entire North East region with the start of the Moragahakanda and Rambukkan Oya reservoirs. The development of water resources in this region will be complementary to the intended permanent peace in the country.

(The writer is a Former Director General of Irrigation and presently the Consultant to the United Nations Office for Project Services (UNOPS))