

THE SILENT VALLEY SCHEME

Some Arguments and Some Reflections.

(Paul Gregorios)

The controversy about the Silent Valley Hydro-electric Project entails several issues - economic, environmental and human.

The economic approach.

Power shortage is one of the biggest problems of India, which grows more and more acute every year. We in India consume only about 3% or less than 1/30th as much energy as the Japanese do, on a per capita basis. Our per capita electrical energy consumption in a year is about 80 KWH (Taiwan - 583 KWH, Israel 1740 KWH). We have 15% of the world's population; we consume 1.5% of the world production of energy. That means we will have to produce 10 times as much in order to become an average consumer. In the ladder of per capita consumption of energy India stands 113th among 150 nations. About 8 affluent countries together produce and consume 50% of the world's energy.

This means clearly that we must use every possible source of energy, if we are to make progress in Industrial Development, and begin to solve our national problem of poverty. In terms of potential resources of Hydro-electric power, we are well equipped with mountains and rivers - not far behind the U.S.A. and the USSR. There is high potential in Panjab, Haryana, U.P., Maharashtra, Tamil Nadu and Kerala. The Central Water and Power Commission has identified some 260 potential sites for hydro-electric power development in India. Our total potential has been estimated as 25 million kilowatt continuous, i.e. when fully exploited, 21,631 million kwh per year.

In 1947 on the eve of independence our installed capacity was 0.5 million kw. By 1975 it grew to 7.52 million kw, with 77 major hydro-electric plants. Today we are on the way to the ~~million~~ 10 million kw installed capacity, which is 40% of our potential. We need more power. The Silent Valley* Hydro-electric scheme was projected already as early as 1920. The technical investigation was carried out in 1958; it was considered by the Kerala State Electricity Board only in the 1970's.

The Valley is located in Palghat district, 45 kilometres north of Mannarkat, on the banks of Kuntipuzha which is a tributary of Bharatapuzha. It is ~~only~~ one of the largest waterheads in Kerala. The four districts of North Malabar, i.e. Cannanoor, Kozhikode, Malappuram and Palghat are comparatively under-developed and need power for its development. 1988-89 requirements are now estimated at 5100 million kwh a year. Silent Valley can provide about 1000 million units. The total hydro-potential of the 4 districts is estimated at 2500 million units. Not to develop Silent Valley as a Hydrel Project is to neglect seriously the development of the four northern districts of Kerala.

If the power supply position in India were better, and the national grid fully in effect, we could extend the 220 kv line that now supplies power from Idukki to Karnataka, to extend to the four northern districts also, or these districts could be fed directly from the Karnataka terminals on the grid. But our national power position is not so good. We need to tap every available source of power. The development of Silent Valley will give employment to many in a State where unemployment is a key problem. It will develop the four northern districts of Malabar which economically now lag behind the rest of Kerala. The Silent Valley is thus a partial solution to the problem of regional imbalance and inter-regional injustice within the State.

* It is called Silent Valley

I am sure that I have not adequately summarized the economic argument for Silent Valley. I would be grateful to find out about supplementary arguments.

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The Ecological Argument.

The ecological argument goes exactly contrary to the economic argument summarized above. It has two aspects - the climatological, and the conservational. If you want the original arguments, you can write to Dr. S.S. Nari of the Kerala Natural History Society (C/o Dr. C.J. Chandra, Veterinary Officer, The Zoo, Trivandrum-695 001) or to the Secretary of K.N.H.S. in Calicut (Science Centre, Annie Hall Road, Calicut - 673 002).

Silent Valley is a tropical rain forest, evergreen, marked by lofty broad-leaved trees, with some 100 inches of annual rainfall. The green leaves touch each other and provide a continuous green canopy for the forest. The temperature is usually in the 80's. So is the humidity about 80%. Sunlight does not reach the forest floor. So there is little undergrowth. The trees are very tall, well buttressed; most of the growth of leaf and flower and fruit is confined to the very top where sunlight is plentiful.

It was a virgin forest till recently - some 8000 hectares or 80 square kilometres, at an altitude of 120 metres to 880 metres on the East Slopes, some 2300 metres high on the north end. There are higher slopes without trees, with only exposed grasslands.

There are reports that 23 species of plants there are unique - not found elsewhere in the world. Four species of rare mammals are already endangered by the incursion of humans into their habitat* - 16 species of hill-stream fishes have been identified so far unknown to science. I cannot personally vouch for these figures and they have been disputed. There are said to be large eels, lizard a flying snake and a number of limbless amphibians.

The Archeological Department says that the Valley has never at any time been inhabited by humans (until the recent Adivasi incursion). If this is true, we have one of the few areas in the world where biological evolution has proceeded without human interference for 50 million years and constitutes one of the few remaining laboratories for the study of biological evolution.

Special interest has been expressed in the Lion-tailed Monkey (simhalakarangu) which dwells on the tops of the tall trees. Reports say that this species is very rare, and a key to the study of the evolution of human beings from other primates. It is believed that humans evolved from a species of high arboreal mammals who had certain social habits which led to their evolution.

They say that there are less than 500 lion-tailed monkeys in the world, and that half of them are in the Silent Valley. According to these Natural History experts, the world had about 1000 of them in 1961-63, and their world population dwindled to about 500 by 1975. The ones in the Silent Valley inhabit the whole Valley as well as the Attapadi Reserve forests around Coimbatore in Tamil Nadu. They are divided into social groups, each social group having a territory of some 5 sq. kilometres of forest. The present community is estimated to live in some 26 groups - if so they need 130 sq. km. of forest (which is about what Attapadi plus Silent Valley covers).

* The Zoological Survey of India says three totally new species of mammals hitherto unknown to man have been discovered in the forest

The lion-tailed monkey drinks from the Kuntipuzha and eats mullan-checka or thorned Jack. If the area is flooded, most of the thorned Jack trees will be gone. Human habitation with domestic animals will bring new diseases to the area, against which the wild life may have no immunity.

Till recently the nearest road was 20 km away. But now approach roads have already been constructed. Adivasis have already migrated into the forest fringes. Poachers and hunters have also now free access. It is also remoured, perhaps without base, that some Kerala politicians have already occupied some of the newly cleared areas and started cultivating cardamoms and other cash crops. There is even the allegation that these are the real vested interests who blow up and promote the ecological argument against the Silent Valley Project. This is far from proved.

Of course the Valley has an area of some 90 sq. kilometres, or precisely, 8952 hectares. The project will occupy some 1022 hectares, of which about 950 hectares will be evergreen forests, and the flooded area would be some 770 hectares. But this is crucial for the whole forest, since the forest is a balanced organism with ~~mutually~~ mutually supports' life systems, in which if one factor is upset the whole may cease to function. Idukki was such a tropical rain forest, but it is getting ruined as a habitat for many animals which are now dying out.

The ecological argument is based on the assumption that:

- a) the project will destroy a unique ecological laboratory, extremely valuable to humanity in terms of scientific research and our care for rare species;
 - b) the project will upset the climatological balance of the area;
- and c) the gain in terms of power and irrigation cannot be compared to the enormous loss which will be entailed by the factors (a) and (b)

Deforestation in the Silent Valley, they say will probably desertify the Palghat area. Palghat district is Kerala's driest, with the lowest rainfall rate. At the moment the green canopy of the project area of the Silent Valley is estimated as hundreds of square kilometres of leaf area. The reduction in the water-vapour transpired by these leaves cannot be compensated by the evaporation from the 8.30 sq. km. of the reservoir.

Denudation of forests for dam and civil works can cause de-stabilization of soils and the vegetative cover; this could lead to changes in the micro-climate and in surface and ground water flow patterns. These in turn could have serious adverse effects on the climate of Nilgiris and Coimbatore as well as Palghat district.

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Conclusion

1. It is clear that only a group of reliable experts who have no vested interests of their own can finally tell us whether these are idle tales or exaggerations or largely true. The important thing is to commission such a group of disinterested but competent persons to check on the facts and report to the public.

2. While the expert group is working on ascertaining the facts, the public can discuss the following questions:

a) If there is a considerable risk of destroying the balance of the Silent Valley and creating climatological problems as well as substantial ecological loss, should we undertake the Hydro-electric project there?

b) What other form of compensation can be given to the northern districts for their development? - a nuclear reactor? Would that take care of the irrigational problems? What about the risks and hazards of nuclear reactors? Has there been a serious proposal for a nuclear reactor in Kerala? Have we studied the problems of nuclear reactors? Should we begin this discussion now already since the issue is bound to come up in any case in the next few years as possibilities of hydro-electric power and oil become exhausted?

The discussion on Silent Valley should thus broaden out to a deeper understanding of the environmental or ecological issue, as well as a wide-ranging study of alternate sources of energy and problems connected with them.