

M.S. SWAMINATHAN

B-4/142 SAFDARJUNG ENCLAVE
NEW DELHI-110 029
Telephone : 679069

September 23, 1988.

Dear

I thank you very much for your kind letter concerning the afforestation of Arunachala and declaring Arunachala a National Heritage Site. I shall discuss this matter with Shri K.P. Geethakrishnan, Secretary, Ministry of Environment and Forests.

With my best regards,

Yours sincerely,

(M.S. Swaminathan)

Shri Dev Gogoi,
'Refuge'
Sri Ramanasramam P.O.
Tiruvannamalai
Tamil Nadu-606 603.

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September 23, 1988.

My dear

I enclose a letter received from Shri Dev Gogoi requesting action on the afforestation of Arunachala and declaring it a **National Heritage Site**. I would like to have an opportunity of discussing with you the development of **National Heritage Site** in our country.

With warm regards,

Encl: As above

Yours sincerely,

(M.S. Swaminathan)

Shri K.P. Geethakrishnan,
Secretary,
Ministry of Environment and Forests,
Lodi Road, New Delhi.

Dev Gogoi

'Refuge'
Sri Ramanasramam P.O.
Tiruvannamalai
Tamil Nadu - 606 603

12 Sept '88

Dr.M.S.Swaminathan
President
International Union for the
Conservation of Nature
and Natural Resources
B-4/142 Safdarjang Enclave
New Delhi - 110 029

Dear Dr. Swaminathan,

the Afforestation of Arunachala
the sacred hill at Tiruvannamalai,
North Arcot District, Tamil Nadu

At the suggestion of Prof.K.Swaminathan of Madras, we write to you with respect to the afforestation of Arunachala.

Please find herewith a brief six-page report on the current situation, including a broad outline of a plan of action.

We are a handful of bodies working part-time and voluntarily, seeking to involve organisations with the resources and capacity to effect the transformations so urgently required here.

Meanwhile, we are devoting our limited abilities towards initiating change modestly but steadily, not only of our ecosystem but also the hearts and minds of our local population.

we earnestly request your advice and assistance, and look forward very much to your views.

Specifically, is there any possibility of declaring Arunachala a National Heritage?

With regards and best wishes,

Yours sincerely,

Dev Gogoi
(Dev Gogoi)

✓
encl: a.a.

c.c: Prof.K.Swaminathan, Madras.

A Brief Note

Being a Draft Plan of Intent for the Afforestation of Arunachala
the Sacred Hill at Tiruvannamalai, North Arcot Dist., Tamil Nadu

Introduction

Revered since ancient times as Shiva himself in the form of a lingam, Arunachala hillock rises 2,668 ft from a vast plain bounded by hill ranges on the horizon. The town of Tiruvannamalai which has grown around the magnificent 8th century Arunachaleswarar Temple at the base of the hill, today hosts a population of nearly 1,00,000 souls, and the surrounding country is inhabited by numerous villages and settlements. The giri-pradakshina road which encircles the hill is 14 km long, circumscribing an area of more than 15 sq.km.

This geometrically symmetrical micro-watershed and catchment area was once a rich and varied ecosystem. The environment was extensively forested by indigenous species and these natural forests were home to precious wildlife including herds of elephants, tiger, leopard, bear, deer, and other smaller species. The minor human population enjoyed the wealth of a wholesome environment, plentiful water resources, and fruits of the land adequate to their needs.

Today, we are witness to a scene of crisis. The disastrous consequences of the rapid and destructive changes brought about by the exploding human population over the last 100 years is everywhere to see. The forests have completely disappeared, and with them the wildlife has vanished. Water is a scarce commodity, both for domestic and agricultural purposes. This region is now well-known as a severely drought-prone district. The quality of life of the ever-increasing human population is abysmal.

In addition to the known socio-economic and demographic forces which have strained the natural ecosystem (which has always been taken for granted) to near breaking-point, the current move to make Tiruvannamalai the district headquarters will result in an explosion of apparent prosperity, leading to a complete breakdown of the capacity of the existing environment to sustain its human population, unless urgent measures are taken to re-forest the hill, and thereby effect soil conservation, regeneration of groundwater resources, and the creation of a micro-climate conducive to the maximum precipitation of rainfall, thus laying the true foundation for the prosperity of the present and future generations.

State of the environment today: causes and consequences

As one approaches Tiruvannamalai along any one of the nine highways which converge upon this pilgrim centre from various directions, the spectacular Arunachala hill which rises above the town is clearly visible from a distance of more than 32 km. On closer inspection, this massive landmark is virtually devoid of vegetation. It is mostly bare rock and huge boulders set amidst reddish earth, with a sparse cover of hardy shrubs and grasses. During the rainy season, this thin vegetative cover gives the hill a soothing green aspect, while for most of the year during the dry months it is brown, harsh and forbidding. It takes a feat of the imagination, based on historical records and the words of our seniormost residents, to believe that the hill was once well forested, with wild animals and water aplenty.

The surrounding countryside is extensively cultivated with crops, partly dependent on the northeast monsoon and well irrigation. There are no natural forests in the vicinity, and wastelands form a significant part of the landscape.

Water: Direct observation and interviews with farmers confirm that the water table has fallen drastically in the past decade. Despite the deepening of surface wells, they yield less water and are dry for most of the year. This has had immediate adverse effects on rural prosperity. The problem is compounded by the need for deep-bore wells which further deplete groundwater reserves, in the total absence of any surface measures to conserve this essential resource.

The town of Tiruvannamalai itself experiences a permanent water shortage. The municipal supply is restricted to very short periods during the day. The numerous tanks and tirthams bequeathed by wealthy patrons in the past are the only other source of water, and these are sustaining the majority of the urban population who are without access to municipal water connections. These tanks are badly silted and ill-maintained.

There are no rivers here, and the area is completely dependent on the rains for its year-round water requirements. Rainfall replenishes surface percolation tanks and recharges groundwater reserves. Both are in severe decline, as rainfall has been sparse, erratic and unlikely to show an improving trend unless concerted efforts are made to restore the environment to its former order.

Rainfall: The dominant geographic factor affecting the micro-climate is the Hill itself, and its present denuded state has the effect directly opposite to that of attracting rain. For most of the year, it is the epicentre of intense heat radiation. The resultant column of hot air prevents any precipitation of rain-bearing clouds which pass over the area, which are normally borne away to shed their precious burden elsewhere.

A well forested hill would in fact, as in the past, attract rain. It would also be a major stabilising influence to day-night temperatures in the vicinity.

Forest: The complete disappearance of the natural forest which once covered the hill has been witnessed despite the fact that the Hill has been designated a reserve forest since British rule. Plans for its use as land ripe for maximum economic exploitation, the disastrous results of this narrow perspective have never been quantified.

A small number of big trees which survived until 50 years ago have also fallen prey to scavenging woodcutters. Their disappearance is so complete that it is difficult to find even the stumps and roots of the great forest which once grew here. Today one can point only to a few teak-tree stumps and clumps of bamboo high on the Hill near the peak. Himalayan plant species and grasses which still survive on the upper reaches are the silent proof that the entire hill was richly forested.

Burning: Much of the hill is covered by long grasses which are harvested as raw material for roof thatching. The rights to this resource are auctioned annually by the Arunachal Pradesh Jhum Devasthanam Committee which controls a portion of the hill (the rest of the land being under the Revenue Department and the Forest Department).

Every year in the driest month, after the grasses have been harvested the entire hill is set on fire. This burning of the hill destroys everything in its path. It kills all micro-organisms, plants and reptilian life. This wanton destruction is of benefit only to the handful of grasscutters. It is stated that the burning is essential to the new growth of grass in the next season. This is a gross misconception. The burning of the hill is not only illegal but also unnecessary. This is the worst possible use of productive lands.

Throughout India, wherever shifting jhum cultivation is practiced, the government has taken firm steps to abolish this slash-and-burn system of cultivation. Even so, jhum cultivation is cyclical, allowing the lapse of a few years for the burnt land to regenerate itself, before it is cultivated again. But the Arunachal hill is burnt every year. This unique and extreme example is intolerable. It has persisted for decades. It must stop now.

It is not essential to burn the hill for the healthy growth of new grass. This is simply the lazy man's answer, who is not willing to do the work necessary for the new season. When the grass is harvested, a foot-high clump is left on the ground, similar to the paddy harvest. It is this stubble which is later burnt to the ground in the driest month, so that the new growth can take place with the coming of the rains. Just as the paddy farmer ploughs his fields before the sowing, the grasscutter must cut these clumps at ground level, allowing the stalks to remain where they fall. The new growth would come up just as vigorously, while the old stalks would add organic richness to the soil. This method would yield better harvests, without destroying the land. The grasscutters will not make the effort and simply burn the hill instead.

The Devasthanam gains the paltry sum of a few hundred rupees annually by auctioning the rights to harvest the grass, a handful of families are gainfully employed for part of the year, and the entire surface of the hill is charred to cinders year after year. This process cannot be condoned any longer. In law, nobody has the explicit right to burn the hill. Previous attempts to call a halt have failed. The authorities must enforce existing rules and orders, banning the burning of the hill forthwith.

Woodcutting: As if the destruction is not complete, the saplings and shrubs which struggle to grow in this already severely degraded terrain are ruthlessly chopped for firewood. On any given day, scores of woodcutters roam unchecked over the hill, bearing away headloads of firewood for home and market consumption. The concerned authorities have, perhaps, other priorities. The natural fertility and vigour of the earth has no chance to reassert itself.

Grazing: Nature is ever bountiful. The seeds of the earth sprout and grow. Plants put out new leaves, fresh shoots. The sparse vegetation of the hill fights a losing battle. It is burnt, cut down, and also grazed. Herds of goats forage the hillslopes every day, their owners apparently immune from the violation of existing laws. Suffice to say it is well-known that goat grazing is the last ecological straw, before the earth is finally broken, rendered barren infertile wasteland. Thus also spoke a Tamil proverb.

Soil erosion: Consequent to the continuing destruction of vegetative cover, the abundant fertile topsoil of the hill has suffered heavy erosion. There is nothing to check the copious runoff of monsoon showers. The water-retentive capacity of the catchment area is minimal and the discharge from the pyramidal watershed is uselessly dissipated in the surrounding areas. There is no comprehensive water-management scheme to husband the natural advantages of the 15 sq.km. area defined by the giri-pradakshina road which encircles the Arunachala hill. Instead, for example, lakhs of rupees were spent recently to de-silt the drainage system of Tiruvannamalai town which was clogged by earth washed down from the hill.

Conclusion: It is obvious that a re-forested Arunachala would be the lowest-cost long term solution to the basic problems confronting Tiruvannamalai. The alternative is fragmented and piecemeal expenditure of private and public resources within narrowly conceived target areas. The cumulative cost over the coming decades of deepening hundreds of wells, seeking municipal water supplies from farther afield, and merely reacting to the consequences of an increasingly desertified environment is insupportable. The timely application of essential ecological principles would cut fruitless expenditure.

Despite the thesis that we are very near the point of no return, the field is clearly defined, well within manageable limits, with bright prospects of visible success following cooperative and concerted action.

Regenerating the Ecosystem--the Afforestation of Arunachala

Recommendations:

(1) Immediate implementation of Social Forestry Project-Phase II:

The Tamil Nadu government in cooperation with the Swedish International Development Agency has initiated a five-year (1988/89 - 1992/93) state-wide social forestry project. The comprehensive objectives of this coordinated effort are the precise answer to the urgent needs of the Tiruvannamalai ecosystem. Unfortunately, this area appears to have been completely overlooked by the enlightened project planners. We earnestly appeal to the concerned authorities to take immediate steps to implement the Social Forestry Project - Phase II at Tiruvannamalai. This great social opportunity must not be missed. It carries the seeds of the future and this initiative would stimulate the dormant synergy self-sustaining synergy of local government and voluntary organisations.

(2) Helicopter broadcast of seeds under National Wastelands Development Board scheme: The NWDB has formulated a scheme under which aerial seeding will be undertaken for growing forest areas, especially in inaccessible places, where trees are essential for the maintenance and restoration of the ecological balance.

As stated by the Advisor to the Governor of Tamil Nadu, this scheme is first to be implemented in neighbouring Dharmapuri district this summer. It will be implemented in North Arcot and South Arcot districts with the onset of the northeast monsoons later this year. If successful, the scheme will be extended to other parts of Tamil Nadu.

We urgently request that this scheme be implemented for the Arunachala hill at Tiruvannamalai, North Arcot District. Helicopter seeding covering the difficult terrain of the entire hill would at a stroke cut the enormous expenditure of manpower, time and money to achieve the same end by conventional means at ground level. This high-visibility operation would also rivet attention of the local population whose morale is at a low ebb.

- (3) Fan burnings
 (4) Fan woodcuttings
 (5) Fan grazing

The existing laws, rules and orders governing the protection and use of the lands around Tiruvannamalai must be strictly enforced by the concerned government departments.

The offenders are small in number, are easily identifiable, and cause havoc out of all proportion to their direct individual self-benefits. They fear the law but take advantage of its blind eye. Most of them have thus taken the soft option instead of working at equivalent part-time employment and under-employment opportunities available within the local economy.

Nevertheless, none of them are ignorant. They would willingly participate in gainful employment avenues which would open up with the work of re-foresting Arunachala. This sustained medium-term project of environmental restoration would in turn buoy the long-term capacity of the rural economy to support agricultural employment and urban activity converging upon Tiruvannamalai from the hinterland of Arunachala.

(6) Check dams for soil conservation and water management: Comprehensive soil conservation and water management systems are totally absent at Tiruvannamalai. Consequently, the full benefits of the monsoon rains are lost to the approximation. A network of check dams and bunds is needed to check the high-velocity runoff from the steep ravines of the hill, and conserve rainwater in surface reservoirs around the base of the hill. No major construction is required. A series of modest earthworks optimally sited in the light of expert survey taking advantage of the natural topography would adequately serve the purpose.

(7) Social forestry: Since 1975, the Forest Department and the Social Forestry Wing have done commendable work, having to date planted about 200 hectares of non-rotational agro-culture forest. In addition, their persistence has overcome even the violent opposition of vested interests within a minute section of the local community. The results of their labour are clearly visible on former wastelands contiguous to the hill and parts of the lower reaches of the hill itself.

The present rate of activity is utterly inadequate. Something is better than nothing, but low-level activity will not avert the full dimensions of ecological disaster. Past achievements have demonstrated that more can be met. Now this work must be expanded, organised and continuously supported on a top-priority basis.

(8) National Heritage Designation: Within the brief span of a century, church, temple and ignorance have bequeathed us an ancient hill of barren beauty, overlooking a landscape stripped of all but the remnants of its former life-giving wealth. Today we are witness to the process of destruction which surrises the generation of decades. Will our children, and their children, inherit insupportable surroundings without any hint of the life we even today thoughtlessly enjoy? Is it their problem, not ours? We are scratching the food of the future from the mouths of the next generation, not from our parents' mouths.

Today, there is not a single tree within this Arunachala Reserve Forest. Our socio-cultural heritage, on the other hand, finds its most powerful expression in the annual religious festival of Kartika-Deepas in November/December, when unto two million devotees from near and far are drawn to the hill, and a sacred fire is lit atop the peak which burns for many days, fed by thousands of individual offerings of ghee poured into a gigantic cauldron. The devout by the thousands, both young and old, also undertake the arduous climb to the top of the hill, braving thirst and burning sun, without the cooling shade of a single tree under which to take rest and shelter.

We trust that concerned minds will move the appropriate bodies to declare this sacred hill a National Heritage. The hill is still rich in remnant seed, shrub and sapling populations, left to itself, nature would steadily regenerate herself. The soil is friable and still retains the capacity to support its original biodiversity. In order to facilitate this, and in addition to direct afforestation schemes, the hill must enjoy absolute protection. Only non-harvest uses of the slopes can be encouraged. Thus, the remaining wildlife will also thrive--the common langur, the rhesus, smaller mammals, reptiles, and a large family of birds, including Siberian migratory species which winter here.

Human needs can be met by controlled zoning and rotational practices in the abundant level lands at the feet of the hill. The entire area of the hill itself must be strictly protected from any form of agro-economic exploitation. In time, the regenerated region could also support educational, wildlife, nature and tourist programmes.

The designation of Arunachala as a National Heritage represents an enabling measure, and is not an end in itself.

(9) Public awareness and peoples participation: This is not lacking. Initial investigations indicate enormous untapped potential. Having vested prime responsibility in the hands of the Government and its agencies, the individual feels helpless when faced with the sweeping canvas of environmental degradation. Offered the framework for cooperation, voluntary organisations and concerned citizens readily respond with understanding and contribute their energies according to their abilities. Nobody needs to be converted. Direct confirmation of the conviction that change can and will come about destroys alienated scepticism and opens the way to realising shared community goals.

Urban youth are eager to participate in tree planting programmes in the districts. Voluntary groups engaged in environmental work elsewhere are keen to share their experience and expertise. Lively communications media like videofilms and shadow puppet & theatre stimulate the local community into thought and action. Distribution of seedling trees or at nominal cost encourages plantation on private lands. Individuals are willing to establish plant nurseries. These are some of the possibilities inherent in Tiruvannamalai today.

Peoples participation can be called upon only if the benefits of afforestation are guaranteed to flow to the community as a whole, and not to any specific third party at a future date. Therefore, administrative responsibility, resource expertise, public agreement on management of objectives, all need to be clearly and explicitly defined.

We sincerely hope that the government will effect the necessary measures which will elicit the best responses of the local community.

Ecology - the inner aspect

Believing that no government environmental programme can possibly initiate and sustain fruitful projects without community support, we consider the inner face of the projected work as of vital, if not primary importance. The aim is to encourage the psychological support of the maximum number of inhabitants.

Since the past fifty years of human population increase has exhibited a singular disregard for the conservation of natural resources, this aim clearly looks towards a revolution in human awareness. This is a viable aim, since the crisis upon which such a revolution is based is alarmingly present and the dangers broadcast provocatively by our mass media.

This aim crisis brings the possibility for change, and initially only a small number of active participants are required to clarify their own intentions, to become acquainted with both the extent of damage and the solutions to problems, and to share in confidence that by working together, all things can be overcome.

Except for minor adjustments in structure contributing to greater mobility, it is our powers of communication which distinguish us from our evolutionary predecessors. Upon this faculty the possibility for change now rests. A certain amount of work has to be done to map the structure of our ecology with cold information, but essentially it is by understanding and communicating this information that attention can be drawn to the domain. It is attention that is most vitally effective.

Our contact with members of several community service groups and teachers here shows that there are many adult persons mature in awareness and capable of taking initiative. By disseminating information and a sense of optimism, the various groups will hold together, and in every possible way support governmental efforts with absolute confidence. The adults representing these groups are clearly oriented towards their own respective fields, and are encouraged to carry out their intentions in concert with government and with one another.

It is to schoolchildren particularly that a call to awaken needs to be addressed. They not only need to be better informed, but also invited to take a stand, those who have the capacity, and join in the realization of both inner and outer aspects of possibility.

We have contact with young environmental groups in other parts of Tamil Nadu. In Madras, wildlife and adventure groups are very energetic and can come here to meet and speak with young people, to exchange experience and enthusiasm. From Auroville and the Palud Hills area, young Tamilians have been working extensively in both aspects of ecology for many years, and have very fine video material to be utilized to contribute to understanding. These films have been compiled by persons involved with the revitalisation of the environment in other areas in Tamil Nadu where ecologists have succeeded in enabling communities to restore a healthy environment.

There are also films conveying the beauty and goodness of nature, and instructing us in the processes of growth and regeneration. Two aspects can be conveyed here: that of the grace and beauty of a healthy and symbiotic way of life, which is worth working towards, and that of a sense of urgency, that work can be done.

We are also exploring possibilities of the making of a video film for young people concerning the growth of the Arunachal project, as seen through the eyes of the young volunteers. We have been invited to visit the sites of extensive reforestation in Auroville, so that young people from this area can see the achievements of their comrades in other places.

Also, we have the support and guidance of the Chhatinath Educational Trust in Madras, and although no specific plans have been detailed at this stage, we feel sure that there will be interaction between children here and those of the S.O.S. Villages concentrated by this trust. The interaction of young people of varied experience of differing localities is extremely valuable to their growth and development.

This month, we have been joined by Michael Hayward, of Moonlight Shadow Theatre in England, who has worked with us here previously, and the plans for a performance are presently being made. This theatre will be performed in Tamil by young Tamilians, to give young audiences. The initial performance draws attention to what has been lost. Subsequent performances will grow out of our collective experience.

Initially, we are circulating an open letter to young persons calling for volunteers, through the various local groups and teachers who are concerned, and in the near future we shall meet with those who respond.

We have confidence that the ground is fertile.

Arunachal Arunachiri

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