

The Year of The Trees

100 million trees

by 1988

to give

SHADE
SHELTER &
SOLACE

to the Millions



SACEP

**TREES ARE A SOURCE OF
FOOD, FUEL, FERTILIZER, FEED ETC.**

YEAR OF THE TREES
1988

A CONCEPTUAL FRAME WORK
FOR PLANTING 100 MILLION
TREES BY 1988 TO COMMEMORATE
THE YEAR OF THE TREES
PROGRAMME FOR SOUTH ASIA

1ST DRAFT

IT WILL BE IRONIC INDEED
IF ASIA HAS ENOUGH CEREALS
IN THE COMING YEARS BUT
STILL GO HUNGRY FOR WANT
OF FUEL TO COOK IT

Prepared

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SOUTH ASIA CO-OPERATIVE ENVIRONMENT PROGRAMME

100 MILLION TREES BY YEAR 1988

S U M M A R Y

- THE MAIN OBJECTIVE OF THIS PROPOSAL IS TO TAKE A MEANINGFUL STEP TO AVOID THE IMPENDING FUELWOOD CRISIS IN THE COMING YEARS.
- FORESTS BELONG TO THE STATE, HENCE NO ONE IN PARTICULAR IS RESPONSIBLE FOR IT! TREES ON THE OTHER HAND BELONG TO PEOPLE.
- ONE BILLION PLANTS WOULD HAVE TO BE PLANTED IN ORDER TO HAVE 100 MILLION SURVIVING TREES.
- IN CASE OF FUELWOOD CULTIVATION, THE MAXIM OF "GROWING FUELWOOD NEAREST TO THE POINT OF CONSUMPTION" WHEREVER FEASIBLE WILL BE A PRIME OBJECTIVE. IN THIS CONTEXT THE 1.6 MILLION HOMESTEADS WILL BE AN IMPORTANT AREA FOR INTENSIVE ATTENTION.
- ALL PLANTING WILL BE UNDERTAKEN BY THE TOTAL INVOLVEMENT AND THE INITIATIVE OF INDIVIDUALS OR GROUPS OF PEOPLE. THEY WILL BE MOTIVATED BY -
 - (A) A WELL FORMULATED COMPREHENSIVE AWARENESS PROGRAMME WHICH WILL ATTEMPT TO EXPLAIN AND EMPHASISE THE KNOWN BENEFITS THAT TREES RENDER TO THE INDIVIDUAL AND THE SOCIETY.
 - (B) ORGANISING A SELF-SUSTAINING NET WORK OF NURSERIES THROUGHOUT THE ISLAND WHERE THE NURSERY-MEN COULD EARN AN ATTRACTIVE INCOME.
 - (C) STATE ASSISTANCE WHICH WILL BE RENDERED TO THE NURSERY-MEN TO UNDERTAKE THEIR TRADE EFFECTIVELY BY THE SUPPLY OF PLANTING MATERIAL, ASSISTANCE TO OBTAIN FINANCIAL SUPPORT THROUGH THE BANKING SYSTEM ETC.
- IF IT IS ASSUMED THAT 10 MILLION ABLE BODIED CHILDREN AND ADULTS OUT OF THE 15 MILLION POPULATION IN THE ISLAND, COULD BE MOTIVATED TO PARTICIPATE IN THIS PROGRAMME, EACH ONE WOULD NEED TO LOOK AFTER TWO PLANTS PER YEAR THROUGH THE NEXT FIVE YEARS TO ACHIEVE THE TARGET OF 100 MILLION TREES. THIS IS THE EQUIVALENT OF 2 MILLION ACRES ON THE BASIS OF 50 TREES PER ACRE.

- APPROXIMATE COST TO THE STATE FOR THE ESTABLISHMENT OF ONE TREE IS ESTIMATED AT RUPEES ONE. IT IS EXPECTED THAT FINANCIAL SUPPORT COULD BE OBTAINED FROM NATIONAL AND INTERNATIONAL AGENCIES WITHOUT RESORTING TO REGULAR TREASURY FUNDS.

- PURELY FOR THE SAKE OF COMPUTING BENEFITS, IF ONE WERE TO ASSUME A UNIFORM STAND -
 - (A) 100 MILLION PLANTS CONSISTS OF A FAST GROWING SPECIES,

 - (B) AVERAGE TO LOW GROWTH RATES OF 5 CWT, OF FUELWOOD PER TREE IN THE 4TH YEAR,

 - (C) THE CURRENT RATES OF FUELWOOD IN THE URBAN MARKET DELIVERED AT HOME IS RS.25/- PER CWT, THEREFORE, ONE CAN ASSUME A STUMP VALUE OF RS.10/- CWT, HARVESTED ON A STAGGERED BASIS, AND DISCOUNTING OTHER CONCOMMITANT BENEFITS TO THE ECO-SYSTEM, THE TOTAL BENEFIT ON THIS ROUGH ASSUMPTION FROM 100 MILLION TREES WOULD AMOUNT TO 5 BILLION RUPEES, IN A THREE OR FOUR YEAR HARVESTING CYCLE, BETTER ESTIMATE OF A HETEROGENOUS STAND COULD BE MADE PRIOR TO IMPLEMENTATION OF THIS PROGRAMME IF THE PROPOSAL IS ACCEPTED IN PRINCIPLE.

SOME OF THE FAST GROWING SPECIES LIKE IPIL IPIL CAN BE HARVESTED ABOUT 10 TIMES AFTER ONE PLANTING AS THEY RATOON TO GIVE AN EXCELLENT CROP IN ABOUT EVERY THREE/FOUR YEARS.

THIS PROPOSAL IS CONSIDERED TO BE AN ADDITIONAL COMPONENT TO THE EXISTING PROGRAMMES IN THIS SECTOR.

Conceptual frame work for the
100 million trees by 1988

PREAMBLE

The Government of Sri Lanka proposed the designation of the Year 1988 as the Year of the Trees for South Asia at the First Governing Council Meeting of South Asia Co-operative Environment Programme (SACEP) which was held in Colombo in January 1983. This proposal was enthusiastically endorsed by the meeting and a declaration was adopted unanimously designating the year 1988 as the Year of Trees for South Asia. At its 11th meeting held in May 1983, the Governing Council of UNEP was very appreciative of the initiative taken by the member states of SACEP and resolved to assist this programme both financially & technically. The Governing Council of UNEP in fact requested the other member countries of Asia to join this programme.

It is customary in implementing strategies of this nature that the country sponsoring the proposal demonstrates its commitment by contributing financial support even in a symbolic manner and organising a comprehensive activity within the country under the umbrella of the declared programme. A classic example of this strategy is the proposal of the Government of Sri Lanka for designating the Year 1987 as the Year of Shelter for the Homeless. In this instance, the Government allocated funds to assist in the organisation of the global programme. But what is far more important and relevant is the formulation of a programme for the construction of million houses with people's participation as the corner stone of the strategy which amply demonstrates the commitment of the Government for the programme.

The proposal now made for the planting and nurturing of a 100 million trees by the people themselves would be an eloquent demonstration of the commitment of this country for the strategy proposed by it in designating the Year 1988 as the Year of Trees for South Asia.

The word 'trees' is deliberately used as against forest for its implicit connotation derived due to a variety of historical factors. Forests in Sri Lanka atleast during the recent past have been the responsibility of the state as most of the forests are vested in the Government or her agencies. Trees on the other hand belong to people and there is

an intrinsic and an organic involvement of the people with the act of growing them as against forest which in fact is outside individual responsibility.

PROBLEM

Like in all South Asian countries, in Sri Lanka, the forest resources are dwindling fast. The statistics regarding this subject are well documented in a number of studies conducted by different agencies. The Problem, however, can be classified into two broad areas :

- a) Availability of fuel wood,*
- b) Its utilisation.*

The problem regarding the availability of raw material was succinctly described by Mr Nanda Abeywickrema, Secretary, Ministry of Lands and Land Development - when he said :

" Fuelwood is used nearly by 94% of the Sri Lanka population for cooking. When considering the total gross energy requirement for all purposes, the contribution made by fuelwood is almost 60%. The price of fuelwood has increased six fold during the last ten years commencing 1973, which was the year when the new prices were imposed on us by the OPEC countries. One has to admit that unless corrective measures are taken, the increase of fuelwood prices would be greater in the future, due to dwindling supplies and greater demand."

UTILIZATION

In the domestic sector, though a number of well meaning attempts have been made in the past, to design methodologies for better utilization of fuelwood resources, they have been sporadic, ad-hoc and lacked co-ordination. Our traditional hearth which consists of three supports is highly inefficient in the utilization of energy. It should however be kept in mind that our fore-fathers designed this stove, when fuelwood was not a scarce resource. It was available in abundance and therefore they could resort to the luxury of utilising fuelwood at such low efficiency. During the last few years, however, fuelwood has become a scarce resource and the need for a comprehensive strategy for the better utilisation of fuelwood has become imperative.

In this context, it is believed that the technology for better utilization of fuelwood is available within the region. But the sociological implications, which is considered to be a paramount factor, are invariably location specific and need careful but quick study. In this context, please see the attached document that was formulated by a SACEP/UNDP Team which was approved at the First Governing Council of SACEP and would be implemented very soon. This project will attempt to collate and co-ordinate the efforts undertaken by various agencies in this area within the member countries of SACEP.

The utilization of a bio-mass as a source of energy for the domestic sector is still in its infancy of development. However, this is one of the areas of high potential for obtaining energy for the rural sector if appropriate cost effective methodologies could be identified.

STRATEGY

The Government of Sri Lanka has in fact launched on a series of comprehensive programmes for the expansion of the tree cover in the Island. Most of these programmes are funded by various donor agencies and they are moulded in the traditional occidental concept of growing exploitable forest for commercial purposes. The latest World Bank project however has a different approach in that a proposed Social Forestry programme has been included. Under this proposal, woodlots are contemplated for the utilization by villagers in certain given areas.

The strategy envisaged in the 100 million trees programme is to foster a greater degree of decentralisation in the growing of trees by individual farmers, rural institutions like the Gramodaya Mandalayas, etc. This programme is designed as an added component to the already existing programmes of the Government.

Two broad but distinct areas have been identified for focus in the implementation of this programme :

- 1) Creating an awareness
- 2) Ready availability of suitable planting material.

Creating an awareness

It is well known that one believes and reacts to only those factors that one is aware. Therefore, as a first step, a professional well-knit campaign should be undertaken throughout the length and breadth of the country explaining and emphasising the unique role of trees as a ready source of food, fuel, fertilizer, fodder as well as a ready source of shelter, shade and a solace to those who grow them. In fact, there is some experience available in the country of such a scheme in the launching of Ipil Ipil, which today is being taken up by various agencies as an useful tree. The costs involved in such a publicity campaign need not be excessive but the effect can be dramatic in motivating people.

Ready supply of suitable planting material

It is common knowledge that a large number of people in this country wish to grow trees and look after them if planting material is available readily. Hitherto, except in very minor cases, the provision of planting material for organised tree planting programme has been the responsibility of the Government. It is envisaged to decentralise this very important aspect by extending financial and technical support through the banking system for a net-work of private nurseries, so that the nursery-men themselves would find gainful employment and that their income would depend on their ability to sell plants at reasonable prices in large numbers which in fact is the objective of this exercise. The programme should be organised with a view to give the people the planting material that they want, be it a fast growing fuelwood species or fruit trees. The publicity programme should however be geared very carefully so that people would request the most suitable planting material for a given agro-climatic zone.

ADMINISTRATIVE STRATEGY

This programme could form an independent and identifiable component of the project proposal that has now been approved for implementation by the National Consultative Committee on New and Renewable Sources of Energy. In view of the fact that this has been formulated as a Sri Lanka's contribution for the Year of the Trees Programme, that the administrative and technical component required for the implementation of this programme should have a life-span of about 5 years.

Like in the introduction of IPIL IPIL to Sri Lanka, the costs of this programme should be transferred to the people themselves, which fact will get the people involuntarily involved in this activity. The training of nursery-men, creating awareness by a publicity campaign, assisting people to obtain loans from the banking system are some of the activities that should be undertaken by the proposed secretariat.

In order to have 100 million surviving plants, it may be necessary to plant (pessimistic) atleast one billion plants, so that a minimum of 10% would bear fruits and flowers and render tangible economic benefits. Going by past experience, this activity could be undertaken at the cost of Re. 1/- per surviving plant. All other expenses will be borne by the people themselves. Assuming a heterogenous population of 50 plants per acre, 100 million plants would in terms of acreages would amount to 2 million acres. This acreage will naturally vary on the number of trees one would assume per acre. The cost of planting one acre on the assumption of 50 trees per acre would cost the state Rs. 50/-.

The detailed operational plan giving the administration, technical and the other components of this project could be worked out by organising a series of well documented workshops, if the proposal is accepted in principle. The political commitment at the highest level from a wide cross section will be an essential pre-requisite for the success of this programme. It is envisaged that most of the money could be generated without resorting to allocations from the Treasury on a regular basis.

BENEFITS

In this first draft no attempt is made to make any serious costing except to give a general outline from the available, though limited, experience of an exercise of this nature. It is indeed an ambitious undertaking requiring a careful administrative financial and monitoring frame work.

However, if one is permitted to make a generalisation by assuring that the 100 million trees are of a uniform fast growing species, hypothetical benefits could be calculated. A fast growing tree like *Leucaena Leucocephala* would yield an average of 5 Cwt within a period of 3/4 years. At the current rates of fuelwood in the urban market delivered

at home is Rs. 25/- per Cwt. Therefore, one can assume a stump value of Rs. 10/- Cwt. Harvested on a staggered basis, and discounting other concomitant benefits to the eco-system, the total benefit on this rough assumption from 100 million trees would amount to 5 billion rupees, in a three or four year harvesting cycle. Better estimate of a heterogenous stand could be made prior to implementation of this programme if the proposal is accepted in principle. Some of the fast growing species like Ipil Ipil can be harvested about 10 times after one planting as they ratoon to give an excellent crop in about every three/four years.

It may be pertinent to state that the South Korean Government undertook a programme with similar dimensions to one suggestion in this proposal with a view to arrest the escalating cost of fuel wood. Within a period of five years South Korea has been able to stabilise the cost of fuelwood and that programme is acclaimed as a uniquely successful one in this very important area of development.