

## ANNUAL PLAN 2004-2005 FORESTRY AND WILDLIFE SECTOR

The Himalayas have always held a deep fascination for the foresters all over the world because of the varied nature of flora and fauna found here. Sikkim is a state which is entirely within the Himalayas, has forests ranging from tropical to temperate and alpine zone.

The state of Sikkim with only 0.22% Of the geographical area of the country harbors around one third of the flowering plants of India. It has about 4500 species of flowering plants and 350 species of ferns and fern allies. Sikkim is the home of the Orchids and has about 450 species both in the sub-tropical and temperate regions. Available genetic material of Orchids in Sikkim has immense potential for commercial varieties. The biodiversity of Sikkim is very rich and also includes wild relatives of more than 400 species of medicinal plants in the state. The state supports luxuriant tropical and alpine vegetation in its pristine virgin form. Its unique geographical position, varied topography, high annual precipitation, minimum demographic pressure makes the state one of the richest botanical treasure houses of the country. While forest cover accounts for over 44% of the total geographical area of the state, the total area of the state under the administrative control of Forests, Environment and Wildlife Department in the state is over 81% of its total geographical area. We have set aside 34% of our geographical area for the protected area network consisting of the National Park, Sanctuaries and Biosphere Reserve as against a figure of 5% or so of the country. Forested areas hitherto unspotted animals like Takin are reappearing. In ex-situ conservation centers wild animals are multiplying. We have successfully bred Red Panda in our Zoological Park.

Explosion in population has led to increased demand of forest products such as fuel wood, fodder and timber in the state. The State Government has given prime importance to tree and fodder plantation in all available degraded forestlands and also in non-forest and private wastelands with people's participation.

Due to increase in livestock population, grazing in the forest areas has been increasing. All the above-mentioned activities are likely to contribute to degradation of forests and environment. To overcome the situation and to increase the participation of the local people in the conservation and management of forest resources of the state and to maintain the ecology of the state without hampering developmental activities, it has become imperative to review the situation and to evolve, for the future, a strategy of environment and forest conservation. Conservation includes preservation, maintenance, sustainable utilization, restoration and enhancement of natural environment. There has been tremendous increase in air pollution in the urban areas due to the increase in the number of vehicles over the years. Due to hilly terrain, land available for non-forestry purposes is very limited. So there is a great demand on this land for various sectors. Land use planning and land management is very important for optimal utilization of land resources in the state. Forests serve an important purpose in a hilly terrain such as that of Sikkim as all forms of land use; including the infrastructure sector as such power generation and the life of roads depend upon the environment stability, which is regulated by the good forest cover.

Although the total tree cover in the state is about 44%, the density of tree cover in main areas is very low. The state would try to increase the area under tree cover further and also improve the density of the tree cover.

A massive need based and time bound 'Programme of Afforestation and Tree Planting' needs to be taken up with greater emphasis in production of fuel wood and fodder in degraded and denuded lands, both forest and non-forest.

An urban forestry programme is a necessity to improve the environment in the urban areas of all the districts through planting of ornamental trees and bushes. Such a programme will increase the scenic beauty of the towns as well as check soil erosion and landslides in these areas.

As a part of the Tenth Five Year Plan strategy the states are taken to be needed for improving the forest cover. The State Government should strive to provide substantial allocation for Forestry Sector for increasing forest cover. Institutional mechanism should also be strengthened to ensure active participation of the people in the management, regeneration and rejuvenation of the forest wealth. Mission mode approach is needed to be adopted to protect the rich biodiversity and the forest cover. A very strict regime of compliance is required to be maintained in regard to the management of forest in pursuance to the orders passed by the Supreme Court of India.

During the Tenth Five Year Plan, special efforts are needed for greater input of recent technological advancement in the field of tree improvement, modern nursery techniques, modern fire fighting technology, improved communication system, use of remote sensing, geographical information system and use global position system, use information technology for setting up of management information system for efficient management of forest resources and improvement of forest productivity.

### **OBJECTIVES**

1. During the Tenth Five Year Plan, greater emphasis will be given to the following activities.
2. Strengthening of infrastructure for protection of forest areas in line with the policy of practicing conservation rather than exploitation through commercial forestry.
3. Strengthening of forest fire control and management system, institution of modern forest fire control methods to reduce loss of forest cover and emission of green house gases.
4. Forest boundary demarcation, survey and erection of boundary pillars for checking forest encroachment, Institute measures and implement programmes for survey and demarcation of forest areas to consolidate the forest resources and prevent their decimation from encroachment and other forms of biotic interference.
5. Formation of Joint Forest Management institutions in as yet uncovered areas rapidly in order to broad base peoples participation in management of forests.
6. Exploration of the possibility of the import of wood products and wood alternatives in order to conserve the forest biodiversity of the Sikkim Himalayas.
7. Development of Farm Forestry as a means to increase the forest cover as well as to produce biomass for on-farm use. This will help in protecting and conserving the Reserved Forest areas for the intangible benefits that accrue from them.
8. Identification of wastelands, degraded forests and undertaking programmes for their restocking by afforestation, natural regeneration on watershed basis with active participation of the local people based on micro plan prepared by the Joint Forest Management Committees.
9. Effective mechanism needs to be developed for promotion of Joint Forest Management for protection and regeneration of forest areas with suitable and agreeable usufruct sharing mechanism to the stakeholders. Programmes are required to be taken up for capacity building, training, awareness generation and empowerment of the Joint Forest Management Committees in keeping with the provisions of different Forest Acts under implementation in the state.

10. Programmes for eco-development along protected area network, such as, Wildlife Sanctuaries, National Park and Biosphere Reserve are need to be implemented with pace and greater vigour.
11. In-situ and ex-situ conservation and propagation of rare and endangered medicinal plants and aromatic plants needs to be taken up in mission mode.
12. Development of post harvesting and value addition techniques for non-timber forest produce for economic upliftment of the people living in the vicinity of forest areas.
13. Detailed survey and setting up of electronic data base on biodiversity resources of the state for undertaking systematic plans and programmes for their conservation and also for protection of intellectual property rights.
14. Tree improvement programmes such as, demarcation of seed stands, seed orchards and clonal orchards, study of ethno-botanical survey are required to be taken up in large scale for genetic improvement of the forest crop raised through reforestation.
15. Improved nursery techniques using organic compost/vermi compost, improved green house and shed house techniques for vegetative and clonal propagation needs to be introduced in large scale.
16. Tissue culture technique for mass propagation of rare and endangered plants also requires to be initiated.
17. Programmes for in-situ and ex-situ conservation of rare and endangered fauna needs to be strengthened.
18. Use of modern techniques of remote sensing, GIS and GPS techniques and information technology for development of effective management information system for management of the forest resources of the state in a more efficient manner.
19. Setting up of computer network down up to the sub-division level.
20. Forest inventory, resource survey, forest cover monitoring, habitat mapping of protected areas and detailed stock mapping of the forest cover by using modern techniques.
21. Preparation of Forest Management Plans/ Working Plans for all the four districts of the state on scientific basis needs to be given priority.
22. Programmes for protection and management of lakes and wetlands, river conservation action plan for Teesta and Rangit Rivers is required to be initiated.
23. Eco-restoration and rehabilitation of landslides by using modern biotechnological inputs by improving soil nutrient status by planting leguminous and deep rooted colonizers species needs to be given priority.
24. Promotion of fuelwood saving devices such smokeless chulahs, improved cardamom driers, use of LPG and solar energy devices for protection of forests in the state are to be provided first in model villages to be followed by other villages.
25. Setting up of air and water pollution monitoring units in major towns to control pollution needs to be taken up.
26. Training on modern forestry practices needs to be imparted to the field functionaries of Forests, Environment and Wildlife Department as well as to the members of the Joint Forest Management Committees.

During the 9<sup>th</sup> Five Year Plan, the Department of Forests, Environment and Wildlife has tried its best to meet these objectives even after so many financial constraints. Today forestry has become a part of development enterprise and it appears very well that forestry and forest related activities have a special potential for employment generation and upliftment of the rural economy.

## **STRATEGY**

The strategy of the 10<sup>th</sup> Five Year Plan will be Conservation oriented. Without support and co-operation of the people forests cannot be protected and forestry cannot go ahead. Massive afforestation programmes with full and active participation of the local people by institutionalization of peoples participation in protection and conservation of the forests and unique biodiversity of the state by constituting and recognizing Joint Forest Management Committees, Watershed Committees, User Groups and Self Help Groups in every village with mutually agreeable mechanism of the usufruct distribution among stake holders are proposed in the 10<sup>th</sup> Five Year Plan.

## **ANALYSIS**

Sikkim has a special role to play as far as maintenance of the ecological balance in the Eastern Himalayas is concerned. The eco-system in this region is geologically fragile and ecologically sensitive and it is incumbent in our part t

ensure that apart from protection and preservation of the existing green cover, more green cover is to be added so as to increase soil stability, reduce runoff and protect the fertile topsoil from being washed away. The growth of population and their continued dependence on fuelwood as a major source of rural energy will result in continuous pressure on the limited forest resources. While over 44% of the states geographical area is under green cover, a substantial portion of this area is under degradation to some degree or the other due to biotic and abiotic factors such as encroachment, grazing and landslides. The threat from the growing population, the need of more and more land for agriculture and house building, the increasing demand of fuelwood, fodder and timber has posed tremendous pressure to the forests in the state and forestry programmes will have to take care of these challenges. Although over 81% of the state's total geographical area is under the administrative control of Forests, Environment and Wildlife Department and over 44% is under tree cover, the outlay in the 9<sup>th</sup> Five Year Plan set aside was less than 2% of the total plan size of the state. The state has to prepare Forest Management Plans (Working Plans) for all the four district of the state in pursuance to the order of the Hon'ble Supreme Court of India in Writ Petition (Civil) No. 202 of 1995 (T.N.Godavarman Thirumulkpad versus Union of India and Others). Development of infrastructure for effective implementation of the Indian Forest Acts, 1927, Wildlife Protection Act, 1972, Forest (Conservation) Act, 1980, Sikkim Forests, Water Courses, Road Reserve Protection (Preservation) Act, 1988 and Pollution Control Act.

## **SIZE OF THE PLAN**

With due consideration of the above factors and constraints as well as justification of the objectives and strategy, the size of the Annual Plan 2004-2004 has been proposed as follows.

**Financial : Rs.565.00 Lakhs**

## ***COMPONENTWISE PROPOSAL***

### **1. DIRECTION AND ADMINISTRATION**

**Annual Plan 2004-2005: Rs. 53.90 Lakhs.**

The proposed outlay meant to strengthen the administration of the head office and other offices with facilities to execute the work more efficiently and effectively. The proposed outlay also includes the establishment cost and recruitment need of I Additional Director, 13 Assistant Conservator of Forests, 26 Foresters, 93 Forest Guards, 1 Deputy Director and I Inspector in the sericulture wing of the Department and 20 ministerial staff in different section of the Department.

The proposed outlay is also meant for computerisation of the Administrative Section, Accounts Section, Planning and Statistical Cell, Research Cell and for setting up of the Monitoring and Evaluation Cell and its computerisation.

In pursuance to the emphasis of the State Government for preservation of the pristine biodiversity for promotion of eco-tourism in the State, it has become utmost necessary to protect and preserve the forests of the state and regeneration of the degraded forest areas with active participation of the local community and the voluntary organizations. As all the forests are not accessible by roads, more manpower is required to protect the vulnerable forests especially in the bordering areas.

**2. EDUCATION AND TRAINING**  
**Annual Plan 2004-2005:Rs. 3.00 Lakhs**

An amount of Rs. 3.00 lakhs has been proposed to meet the training expenses of compulsory training of IFS officers and refresher courses of SFS officers.

**3. PLANNING, STATISTICS AND DATABASE**  
**Annual Plan 2004-2005 :Rs. 23.85 Lakhs**

The Department of Forests, Environment and Wildlife has a full-fledged Planning and Statistical Cell. The performance of the Department can be ascertained by analyzing the data obtained from various sections and future planning depends after proper analysis of the past performances and the impact of various schemes in the life of the local communities. The Planning and Statistical Cell of the Department is required to be strengthened by providing three sets of Computers for data processing, analysis and compilation of information pertaining to Forestry, Wildlife and Environment. To meet the salaries and other establishment cost including cost of computers, an outlay of 23.85 Lakhs has been proposed the Annual Plan 2004-2005.

**4. SURVEY AND UTILIZATION OF FOREST RESOURCES.**  
**Annual Plan 2004-2005: Rs.71.15 Lakhs.**

Sikkim is one of the Biodiversity Hot Spot in the Country. It has the unique geographical location with the altitude ranging from about 300 in the confluence of Teesta and Rangit rivers to over 5500 metres of the Khangchendzonga Range. The vegetation type varies from the Tropical Dry Deciduous in the foothill to the alpine scrub in the Himalayas. The high altitude flora comprises of a variety of medicinal plants. The local population is using the medicinal plants to cure different diseases and ailments. These plants are of ethn- botanical importance. A detailed survey of plant and animal diversity of the state biodiversity has been proposed to be carried out during the Tenth Five Year Plan

Sikkim State Forest land had been Surveyed and Boundary line Demarcated by providing the clear boundary line and erecting the boundary post during the regime of Chogyal in 1909-1911. After a lapse of 90 years, now it is proposed to take up re-demarcation of boundary line and erection of boundary post during the 10thFive Year Plan. It is felt necessary to take up re-demarcation work at least in the Reserve Forest as there is tremendous pressure mounting day by day on encroaching of forest land by number of villagers and other agencies. The creation of clear boundary lines and erection of boundary post will not only help to save the forest land but it will also improve Environment, Biodiversity, Eco-system and tree coverage.

The Survey & Demarcation Wing of the Department which is headed by O.S.D. requires full fledged office of the DFO in all the four Districts assisted by one ACF in each district, two RO's 3-4 B.O's, 3-4 Surveyors, 6-8 Chainman and 2 draftsman and 2 tracers in the technical section of each Division. In the Ministerial and Accounts section each division will require one UDC, one LDC, one accountant one accounts clerk and minimum of 2 peons. Presently there is only one Division.

The Reserve Forests were demarcated as far back as during 1902 and Khasmal of Gaucharans were demarcated in the year 1905 and 1911 respectively. Since then the population of State has gone up tremendously and there has been encroachments in R.F., Khasmal as well as in Gaucharans. Sikkim being a hilly State with rugged terrain and having several problems inaccessibility of the remote areas, it has become difficult to ascertain the exact area of such encroachments of Forrest Land. A detail survey of the Forest boundaries as well as erection of boundary pillars, clearing of boundary lines and to initiate eviction of the encroachers will be the prime task on under this scheme.

The Forests are located mainly on the hill tops and valleys. The areas in between are inhabited and are mainly agricultural land. The forest areas adjacent to the villages are very much vulnerable to encroachment.

Due to paucity of fund in the 9<sup>th</sup> Five Year Plan this scheme was not implemented and has been proposed as new scheme of the 10<sup>th</sup> Five Year Plan.

In pursuance to the order of the Hon'ble Supreme Court of India dated 12<sup>th</sup> December 1996 and 15<sup>th</sup> January 1998 in Writ Petition (Civil) No. 202 of 1995 (T.N.Godavarman Thirumulkpad versus Union of India and Others), the management plans for working in the forests of all the four districts of the state are to be prepared as early as possible and seek approval of the Government of India for implementation. The Department prepared Working Plan for South District and Submitted to the Ministry of Environment and Forests, Government of India in the year 2001. The Ministry has returned Working Plan document after some observations for rectifications which is being taken care of by the Department and will be resubmitted to the Ministry for approval. For preparing the working plans for the remaining three districts, the following works have been proposed in the 10<sup>th</sup> Five Year Plan.

**A.** Inventory of the Forest Resources (Trees): Total inventory of the forest resources will be taken up for trees in those areas where working is to be done in the succeeding years. In total an areas of 2500 Ha .is proposed to be taken up during the plan period and on year wise basis 500 Ha .per year. The basis of expenditure is as follows.

For complete enumeration of one Hectare of forest area, on an average 8 persons are required in one day (making two groups, one group making enumeration of 400 trees in one day). The cost component coming out to be Rs.400/-per Hectare. The total cost is Rs.10 Lakhs.

**B.** Survey and Mapping of occurrences of important medicinal plants: The survey using sample plots is to be conducted in an area of nearly 3000 Square Km. above 6000' altitude .One sample plot of dimensions 10m, X10m.in an area of 1 sq. km. Nearly 10-12 important species will be covered. Species wise occurrence mapping will be taken up. Nearly 600 sample plots will be taken up in a year .All these are in areas 6000' amsl.The basis of expenditure is Rs.500 per sample plot. This includes cost of camping in the area, portage etc., clearing of weeds, unwanted branches .The total cost is Rs.15 lakhs.

**C.** Biodiversity Survey: In the Bio Diversity survey, areas important from the bio diversity points of view will be identified and intensive survey will be taken up in those areas .A sample plot per square km will be taken up in the R.F. areas. The dimensions of the plot will be 44.72 m. diagonal. The sample plot areas will be 1 Ha. Regeneration survey will be a part of it. The basis of expenditure is Rs.1000/-per Hectare. Five persons will be engaged for four days. The works include Survey of entire area, survey & inventory of existing flora, Botanisation of important species,

Laying out of preservation plots with 100m.X100m.area, compass survey of the blank and degraded area for in-situ/ex-situ conservation. The total cost is 12.5 lakhs.

**D.** Stock Mapping: during the plan period the detailed working plan survey will be completed. Already the survey is being done for the preparation of the working plan. Total 4000 sq. km. area will be taken up for the survey during the plan period. This will be done during the initial years of the plan period so as to complete the working plan early. The basis of expenditure is: for 100 ha. eight persons @ 600 Rs .per 100 Ha .of stock survey. The works include stock mapping, assessment of crop, vegetation mapping, studies of forest density, grazing and fire incidences, micro climatic factors etc .The total cost is 24 lakhs.

**E.** Machinery and Equipments: The working plan wing is severely lacking in the necessary system support in the form of essential machinery and equipments. In order to keep abreast with the latest developments in the forestry sector, it is imperative for the department to bolster its essential base of the machinery and equipments a composite GIS workstation is proposed with following features:

**F** It will be updation of the existing GIS facility in the department viz. very much outdated. To transfer it to the Windows NT along with additional facilities like cartographic map finishing, image processing software etc. Tentatively Rs. 17 lakhs are required. The total projection in this head is Rs.50.00 lakhs.

**G.** Other than this a component of Rs.10.00 lakhs is kept for the procurement of upgraded software

## **5. FOREST CONSERVATION, DEVELOPMENT AND REGENERATION**

Although Sikkim has a very rich biodiversity but the facts and figures are not available for the management of the existing natural resources on a sustainable basis. For maximization of the productivity without negative impact on the rich biodiversity, the following activities are proposed.

### **(i) Forest Protection**

**Annual Plan 2004-2005**

**Rs. 25.37 Lakhs**

Sikkim has one of the largest forest areas in the country in terms of percentage of geographical area of the State. Forests cover 44% of the State's area. It abounds in floral wealth and it is estimated that there are about 4000 species of angiosperms, 300 species of ferns and 23 species of bamboos that grow at various altitudinal zones. Besides, Sikkim is the home of more than 450 species of orchids, 50 species of rhododendrons and about 100 species of Primulas. Sikkim is also rich in faunal species such as the sheep, red panda and rare pheasants such as Khali, Monal, Snow Leopard, Musk Deer, Himalayan Thar, Blue Sheep, Tibetan Sheep and Tragopans etc.

The State Government has adopted a conservation oriented forest policy aimed at preserving the forests and restricting the commercial activities to plantation thinning only. In line with this approach legal provisions have also been reviewed in order to make them foolproof and stringent. Cases of illicit smuggling and felling of trees are being pursued in the Courts of law. This has placed a certain amount of pressure on the Forest, Environment and Wildlife Department to provide logistics of infrastructure to the territorial divisions to carry out forest protection functions. Such means may also include items which are of recurring nature but which are to be treated as Plan items in view of the services provided by forests both in economic as well as social terms. The Planning Commission and the Ministry of Environment and Forests have also recognized forest protection measures to be Plan expenditures.

The major components under forest protection consists of fencing of forest establishments, providing of means for patrolling by hiring of vehicles as well by maintaining patrol vehicles, construction of forest quarters especially for the forest guards in the remote areas, replacement of outdated vehicles, procurement of arms and ammunition, training in the use of arms, wireless communication, construction of cattle pounds, construction of log huts, purchase of equipments such as camping gear, purchase of books and stationary for legal matters, purchase of computers, purchase of survey instruments. The projected physical and financial forecast is as follows.

**(ii) Integrated Forest Protection Scheme:**

**Annual Plan 2004-2005:Rs.34.30 lakhs**

Integrated Forest Protection Scheme is being funded the Ministry of Environment and Forests, Government of India on the basis of 75% central and 25% state sharing basis. The state share of Rs. 34.30 lakhs has been proposed for the year 2004-2005.

**6. SOCIAL AND FARM FORESTRY**

**(i) FUELWOOD PLANTATION**

**Annual Plan 2004-05 : Rs. 2.00 Lakhs**

In the 9<sup>th</sup> Five Year Plan Area Oriented Fuelwood and Fodder Project Scheme in the pattern of 50:50% State and Central Share was implemented for production of fuelwood and fodder. Since the Government of India has discontinued this scheme and transferred to FDA, only the maintenance cost for the plantations created in 9<sup>th</sup> five year plan has been provided in the 10<sup>th</sup> Five Year Plan. For the year 2004-2005 out of the total provision of Rs. 4.00 lakhs, Rs. 2.00 lakhs has been proposed as the 50% state share.

**(ii). Aesthetic and Urban Forestry**

**Annual Plan 2004-2005:Rs. 25.26 Lakhs**

**Physical Target: 60.00 Ha.**

In the 9<sup>th</sup> Five Year Plan, Rs. 140.00 Lakhs was allocated out of which Rs. 20.00 Lakhs was spent for creation of Heritage Park at Namchi South Sikkim and Rs. 40.00 Lakhs for protection of Rabdentse R.F. for creation of proposed bird sanctuary. The remaining Rs. 80.00 lakhs was spent on creation and maintenance of Saramsa Garden and Orchidarium. With adjoining degraded forestland from Rangpo to Nathula in East, Melli to Gyalshing in South / West, Singtam to Namchi-Jorethang in South and Gangtok to Mangan in North / East Districts have been proposed in the 10<sup>th</sup> Five Year Plan. Planting with both indigenous and exotic plant species including shrubs, climbers and epiphytes both from the point of view of preservation of the rich gene pool besides beautification in urban areas. Creation of Heritage Park at Tsamgang, Namchi, South Sikkim, Development of infrastructure in the proposed Bird Sanctuary at Rabdentse, Creation of alpine botanical garden at Gangtok are some of the schemes earmarked for the 10<sup>th</sup> Five Year Plan.

**(iii) Sericulture Development**

**Annual Plan 2004-2005:Rs. 39.50 Lakhs**

**Physical Target: 20.00 Ha.**

The Sericulture scheme as being implemented by the Directorate of Sericulture since after the sanction and approval given the government of Sikkim envisages with the activities like adaptation of farmers in the line of Mulberry sericulture practices and development and strengthening of required infrastructures in the different govt. sericulture Farms and Nurseries. The main aim and objectives of the Sericulture Scheme that has been patronized and being implemented is based on the following:



1. To provide the technology of agro-based industry to the farmers of different villages.
2. To extend the held and guidance (financial and technical) support to the interested farmer.
3. To uplift the economic condition of the rural people by generating the income out of the limited landed property of the farmers.
4. To create the awareness of self-employment opportunity amongst the educated people.
5. To augment the required infrastructures for the increase of productivity of the existing govt. sericulture Farms and Nurseries.

In fact the work undertaken by the department during the 9<sup>th</sup> plan period was quite satisfactory in respect of target achievement however, the productivity of the farms /nurseries and in the villages remain below the satisfactory mark. In spite of every efforts of the department, there have been the negligence in the practice of sericulture by the adopted farmers and some have neglected totally, thereby creating another list of defaulters. In the 9<sup>th</sup> Five Year Plan, Rs. 500.00 Lakhs was earmarked for development of sericulture in the State out of which Rs. 158.39 lakhs was spent in the 9<sup>th</sup> Five Year Plan by adopting 300 farmers in mulberry cultivation and silkworm rearing.

The reason may be not the same for all the farmers but the remedy should be the same in all respect of defaulter farmers. Thus, this time the fund provision for the revitalization of old neglecting sericulture farmers have been made in addition to the work items as included in the previous scheme. The size of the annual fund however, is limited to the amount remain as spill over of Rs.341.61 lakhs out the total sanctioned amount of Rs.500.00 lakhs. And including all the works that was pending annual work programmes have been finalized to continue in the 10<sup>th</sup> Five-year plan. 500 farmers will be taken as beneficiaries for mulberry cultivation in the 10<sup>th</sup> Five Year Plan and 200 Hectares of wasteland will be developed for mulberry cultivation and silkworm rearing

**{iv} PLANTATION SCHEME**  
**Annual Plan 2004-05:Rs.28.80 Lakhs**  
**Physical Target: 90.00 Ha.**

The estimation of the Forest Survey of India reveals that there are large chunks of degraded forest lands that need to be taken up for forestry development in order to provide both the tangible and intangible benefits that accrue from forests. It has been estimated that there is more than 1000 sq. kms of forest land that need attention due to its degraded state. Much of this degraded land is within those forest lands that are classified as reserved. These are administered and controlled by the territorial divisions in the four districts of the State and hence the responsibility of developing them also vests with those divisions.

During the Ninth Plan there were two schemes that were in operation to bring such degraded lands under afforestation. These were the “Greening of Ecologically Fragile Areas” and the “Rehabilitation of Fire Damaged Areas” Scheme. The targeted coverage of these schemes could not be achieved due to the increase in the wage rates during the period of the Plan. It has been proposed to continue the scheme in the 10<sup>th</sup> Plan and for the annual Plan 2004-05 an outlay of Rs. 28.80 lakhs has been proposed.

**7. FOREST PRODUCE**

**Annual Plan 2004-2005; Rs. 2.43 lakhs**

To meet part of the operational expenses of Utilization Circle of the Department, an amount of Rs. 2.43 lakhs has been proposed for the Annual Plan 2004-2005.

## **8. RESEARCH**

Sikkim as a whole, when considered micro-climatically has a tremendous scope of working on its bio-resources particularly, non-timber forest produces, Orchids and bamboos besides its faunal richness. The whole of the state can be converted into a focal site of eco-tourism which is one of the services of non timber forest produces. Having such unique heritage and richness in bio-resources we are yet to make any headway on our part so far any systematic forestry research is concerned. In the 9<sup>th</sup> Five Year Plan, No separate scheme of forestry and wildlife research was implemented due to lack of financial resources. It has been proposed to take up research activities in a systematic manner in the 10<sup>th</sup> Five Year Plan. This scheme is an on-going scheme of the 9th Five Year Plan.

### **(I) Forestry Research**

**Annual Plan 2003-2004: Rs. 36.55 Lakhs**

The Research, Education and Extension Circle in Forests, Environment and Wildlife Department came into being in the year 1997. The Silviculture Division and Research wing of Wildlife are the other wings included under this circle. After the inception of this circle a National level seminar sponsored by ICFRE Dehradun was organized by this circle in 1998. Many research regional activities were finalized and submitted to ICFRE, through the regional Officer Institute of Forestry productivity, Ranchi. Of the many research projects selected the five numbers of Research projects were prioritized and submitted to ICFRE Dehradun through regional office Ranchi. Accordingly the details project for the following research activities have been submitted by us.

1. G.I.S
2. Environmental status survey of urban areas of Sikkim
3. Bio-diversity
4. Seed stand improvement
5. Nursery technologies

### **(II) Wildlife Research**

**Annual Plan 2004-2005: Rs. 1.75 Lakhs**

Wildlife and Forestry research is a scientific job involving total dedication to the subject and work beyond the call of government duty. Almost every forest area, national park or sanctuary in the country has a Research Officer to gather wildlife and habitat information for scientific study and to assist in the long-term management of these key and often bio-diverse areas.

In Sikkim wildlife research and extension is being carried out at present by the Sr. Research Officer (Wildlife). Large amount of information has been gathered from all corners of the state. Still, there have been many problems in ensuring smooth and unhindered progress of research works. Lack of support staff, motivated or otherwise, contrasts sharply with the sympathy and encouragement from the superiors. There is lack of visible, immediate achievements. It has hence been difficult for a bureaucratic setup to ensure sufficient budget and logistic support. Put simply, in a really research-based organization, the work achieved over the last decade would have been more efficiently completed in much shorter time.

Now to streamline the ongoing wildlife research activities for fruitful results, a proposal has been worked out. It aims at establishing a full-fledged **Research Education and Extension Cell** with all the requisites including backup of reliable and reputed scientific organizations. This would help to tap a lot of latent talent lying in various government departments or even create employment opportunities for the educated unemployed youth. Those of them interested in further research would have ample opportunity to pursue their interests in their own State and a coveted chance to work in one of the world's best biodiversity hotspots.

It is widely acknowledged that today more and more attention is being directed towards research in various fields. Wildlife research as an academic field occupies a special position. Already there are many organizations, which have targeted Sikkim as one of India's most unique biodiversity study areas. Many of the interested international funding organizations could be tapped for research proposals from Sikkim.

**Works Executed so far and continuing on Wildlife Research:**

1. **Field Research Activities:** Extensive baseline surveys in remote far-flung areas in appropriate seasons for endangered species of wildlife.
2. **Butterfly Park:** Preliminary works completed on establishing a Butterfly Park for environment enrichment, awareness, revenue generation from visitation fees and job opportunities for local people.
3. **Nature Education:** Lectures, workshops, talks and audio-visual presentations to Army, schools, mountaineers, tourist guides, teachers, officers of the government at AATI, SIRD, etc.
4. **Publicity:** Production of all wildlife brochures, T-shirts, stickers, etc. for Wildlife Week programmes, talks on AIR.
5. **Publications:** a) Scientific publications in journals and newsletters  
b) Departmental Newsletters (First three issues of 'PANDA')  
c) Technical Reports on research works conducted so far
6. **Presentation of Scientific Papers** and representation during symposia, seminars and workshops at national and international forums.

**9. WILDLIFE PRESERVATION**

**(I) DIRECTION AND ADMINISTRATION  
Annual Plan 2004-2005: Rs. 77.32 Lakhs**

The Wildlife Wing of the Department is headed by the Chief Wildlife Warden and the Chief Conservator of Forest (Wildlife). The Wing has two Circles viz Wildlife Circle and Parks and Zoo Circle. There are three Wildlife Divisions. To cover the Direction and Administration cost of the newly appointed Block Officers, Forest Guards and for the proposed appointment of 4 Assistant Conservators of Forests, one in each district, an outlay of Rs. 77.32 Lakhs has been proposed.

**(II). HIMALAYAN ZOOLOGICAL PARK, BULBULEY.  
Annual Plan 2004-2005: Rs. 20.31 Lakhs**

Himalayan Zoological Park at Bulbuley, Gangtok was started in the 8<sup>th</sup> Five Year Plan and continued in the 9<sup>th</sup> Five Year Plan. This is an on-going scheme of the 8<sup>th</sup> Five Year Plan which has continued in 9<sup>th</sup> as well as 10<sup>th</sup> Five Year Plan. The details of the project are as under.

1. Establishment of Project	- <u>1991-92</u>
2. Initial Project Cost	- Rs. 467.00
3. Revised Project Cost (1997)	- Rs. 675.55
4. Revised Project Cost (2000)	-Rs 1,064.00
<b>A. Expenditure upto 9<sup>th</sup>.plan</b>	- Rs. 395.03 lacs.
<b>B. Fresh Proposal for 10<sup>th</sup>.plan</b>	- <u>Rs. 1,504,60 lacs.</u>
<b>TOTAL OF (A + B)</b>	- <u><b>Rs.1,899.63 lacs.</b></u>

**ANIMAL HOUSED IN THE ZOO.**

<u>SL.NO</u>	<u>SPECIES</u>	<u>MALE</u>	<u>FEMALE</u>	<u>TOTAL.</u>
1.	Himalayan Black Bear	1	1	2
2.	Barking Deer	1	4	5
3.	Goral	2	-	2
4.	Red Panda	4	1	5
5.	Tibetan Wolf	1	1	2
6.	Leopard	1	1	2
7.	Leopard Cat	1	1	2
8.	Palm Civet	3	1	4
9.	Impean Pheasant	1	1	2
10.	Tragopan Pheasant	1	-	1
11.	Common hill partridge	1	-	
	<b>TOTAL</b>	<b>17</b>	<b>11</b>	<b>28</b>

**PHYSICAL TARGET COMPLETED TILL THE END OF 9<sup>TH</sup>.PLAN.**

<u>SL.NO.</u>	<u>NAME OF WORK</u>	<u>PHY.</u>	<u>FIN.(IN LAKH)</u>
<b>A.</b>	<b><u>Animal housing.</u></b>	(Enclosure area)	
1.	Himalayan Black Bear	18,366 m2	19.01
2.	Barking Deer	20,000 m2	7.39
3.	Red Panda	690 m2	6.49
4.	Pheasant	300 m2	6.99
5.	Spotted Deer	20,000 m2	8.26
6.	Monkey	2,250 m2	12.95
7.	Palm Civet	400 m2	4.81
8.	Leopard Cat	400 m2	4.80
9.	Wolf	1,500 m2	14.69
10.	Goral	13,000 m2	18.52
11.	Snow Leopard	1,800 m2	15.31
12.	Common Otter	800 m2	6.55
13.	Serow (phase I)	15,000 m2	14.81
14.	Musk Deer	10,000 m2	17.11
15.	Leopard	950 m2	21.66
	<b><u>B. Infrastructure</u></b>		
16.	Peripheral fence	11 km.	43.28.
17.	Road	3 km.	67.18
18.	Foot Path	4 km.	4.98
19.	Water Supply	Phase I	7.98
20.	Power installation	Phase I	7.16
21.	Entry & Exit Gate	2 nos.	8.07
22.	Class IV Quarter	2 nos.	7.17
23.	Feed Store	1 no.	3.90
24.	Halting shed	2 nos.	0.63
25.	Landscaping & beautification	1 Ha.	4.00
26.	Field office	1 no.	4.63
27.	Public Toilets	2 nos.	3.68
28.	Tranquilising equipments	1 set.	1.50

**C. Miscellaneous.**

29.	Direction & Administration including animal feed	<u>52.39</u>
	<b>TOTAL :</b>	<b><u>395.03</u> lakhs.</b>

In the Annual Plan 2004-05, an outlay of Rs. 20.31 lakhs has been proposed.

**10. OTHER EXPENDITURE**  
**Annual Plan 2004-2005: Rs. 7.67 Lakhs**

For meeting up the expenditure of Muster Roll Workers in Head Office and for the contingent expenditure, an amount of Rs. 7.67 lakhs has been proposed

**11. PUBLIC GARDENS:**  
**Annual Plan 2004-2005: Rs. 70.34 lakhs**

For the maintenance of Saramsa Garden, Rustamji Park, Tibetology Garden, Heritage Park at Tshamgang, creation off Jurelidara Park and for development of Eco-Tourism Park at Rabdentse, an amount of Rs. 70.34 lakhs has been proposed.

**12. INFRASTRUCTURE DEVELOPMENT:**  
**Annual Plan 2004-2005: Rs. 37.00**

An amount of Rs. 37.00 lakhs has been proposed for construction of Forest rest House at Sombaria, in West and Phurcha Chu Rest House at Reshi, South Sikkim during the year 2004-2005.

**13. GRANTS IN AID TO ZILLA PANCHAYAT**  
**Annual Plan 2004-2005:Rs. 4.50 lakhs**

To provide the State Share in IWDP Scheme (91.67: 8.33) CSS scheme in West district, Rs.4.50 lakhs has been proposed for the Annual Plan 2004-2005.

**Abstract of Annual Plan 2004-2005**

**Sector: Forestry and Wildlife**

Sl. No.	Name of Scheme	!0 <sup>th</sup> Five Year Plan			Annual Plan 2004-2005		
		Physical		Financial	Physical		Financial
		Kms.	Area in Ha.	Rupees in Lakhs	Kms	Area in Ha.	Rupees in Lakhs
1	Direction & Administration	-	-	885.00	-	-	53.90
2	Education & Training	-	-	30.00	-	-	3.00
3	Research						
(i)	Forestry Research	-	-	100.00	-	-	36.55
(ii)	Wildlife Research	-	-	90.00	-	-	1.75
4	Survey & Utilization of Forest Resources	232	-	300.00	53	-	71.15
5	Planning & Statistics	-	-	130.00	-	-	23.85
6	Forest Conservation, Development and Regeneration						
(i)	Forest Protection	-	-	145.00	-	-	25.37
(ii)	State Share in Integrated Forest Protection Scheme (75:25) CSS						34.30
7	Development of Infrastructure		-	180.00			37.00
8	Social and Farm Forestry						
(ii)	Sericulture Development	-	200	250.00	-	10	39.50
(i)	Aesthetic & Urban Forestry	-	600	300.00	-	10	25.26
(iii)	Fuelwood Plantation						2.00
9	Plantation Scheme		1200	275.00	-		28.80
10	Forest Produce			10.00			2.43
11	Other Expenditure	-	-	-	-	-	7.67
12	Wildlife Preservation						
(i)	Direction and Admn.			200.00			77.32
(ii)	Himalayan Zoological Park	-	-	200.00	-	-	20.31
13	Public Gardens			365.00		10	70.34
14	Grants in Aid to Zilla Panchayat						4.50
	<b>TOTAL:</b>	<b>232</b>	<b>3200</b>	<b>3500.00</b>	<b>53</b>	<b>30</b>	<b>565.00</b>

## SOIL AND WATER CONSERVATION (FORESTS) PROPOSAL FOR THE ANNUAL PLAN 2004-2005

The entire state of Sikkim lie along the lower Himalayan belt rendering the land susceptible to slips and slides. Torrential rains aggravate the already existing erosion problem eating away large chunks of soil during the monsoon period causing flood and devastation in the low region. Economic development in the shape of road building, construction of power station, the spread of urban areas and the increasing hunger for agricultural land also have serious implication as far as soil conditions are concerned. Soil erosion is mainly caused due to hill denudation as the need for timber and fuel increase due to the ever-increasing population. Surface runoff is a major factor when fertile topsoil is washed away to Teesta & Rangeet rivers. This unfortunate development can have far reaching economic and environmental repercussion not only in the whole of India but perhaps in other parts of the World either through the complex network of global economic interdependence or by contact with adjacent ecosystem. The situation in the Himalayan belt is of extreme concern as the entire eco-system is facing widespread degradation and has led to perceptible reduction in land productivity due to erosion, excessive rainwater run off and reduction in ground water discharge.

The soil and water conservation programme, therefore occupies a paramount place in the overall developmental activities of the State. This programme therefore has to have a proper and suitable combination of both engineering and vegetative measures without which the fragile and steep slopes of Sikkim would continue to succumb to the torrential rains. Apart from integrated conservation measures within the identified watersheds, equal importance has also been accorded to tackle the erosion problem and minimise ecological disturbances outside the watershed areas.

Sikkim abounds in a number of high altitude perennial lakes which from the sources of water feeding the main rivers. Preservation of these water sources is of utmost importance for human life and to keep the sources alive. Water harvesting technique is encouraged in areas where rainfall is scanty.

During the 9<sup>th</sup>.plan period afforestation of 962.33 hectares, 103 Hectares of Soil and Moisture Conservation Works through vegetative measures along with 140 cubic metres of engineering works have been achieved in the identified watersheds. The major challenge therefore is to devise suitable location specific solutions so as to accelerate the developmental process and ensure sustainable development of the growing population as well as help maintain the ecology of the hill areas of Sikkim.

Activities carried out in the 9<sup>th</sup> Five Year Plan.

Sl.No.	District	Activities carried out during the 9 <sup>th</sup> Five Year Plan		
		Afforestation	Soil & moisture conservation (Vegetative measures in Ha.)	Engineering works in cubic metres.
1.	North	90.00	-	-
2.	East	322.50	19.00	-
3.	South	321.50	67.00	140.00 cu.m.
4	West	228.33	17.00	-
<b>Total</b>		<b>962.33</b>	<b>103.00</b>	<b>140.00</b>

During the 10<sup>th</sup>.Five Year Plan the following activities are proposed to be undertaken in an enhanced manner under the State Plan.

1. Survey & studies of already existing landslide and landslip prone areas.
2. Reclamation & Rehabilitation activities through suitable engineering and vegetative measures.
3. Provide protection to all towns and settlement areas from flood by training rivers & jhoras through engineering works.
4. Provide efficient network of surface drainage system based on scientific investigation & design along with anti-erosion works in some of the chronic landslide zones.

#### **ANNUAL PLAN 2004-2005**

**Size of the Plan : Financial – Rs 80.00 Lakhs**

The entire State of Sikkim located along the Himalayan belt has a very young geological formation with extreme susceptibility to soil disturbance due to natural & seismic factors. Further the torrential rains that the state experience during the entire monsoon period, starting from the middle of May to almost end of October also has a very severe impact on the soil structure. All these factors combined together bring about landslides, soil erosion and loss of green cover.

The two main rivers with its various tributaries have high current due to topographical features & during the period of monsoon when the discharge increase, it increases the quantity of loss, sometimes taking away vast areas of forest & private lands.

Further, the two major catchment areas of the rivers Rangeet & Teesta were studied by M/S HAQ consultants who have recommended measures of enormous significance for conservation of green cover, catchment area treatment & control of water flow from these areas .

The major catchment of these rivers have been divided into 30 watershed s & the Forest Department of the State government is carrying out the activities as suggested by the consultants on priority basis.

#### **1. Direction & Administration**

**Annual Plan 2004-2005:Rs.35.34 Lakhs**

The treatment of all the identified watersheds has become most essential to arrest soil erosion & augment the water regime. The department therefore, has to strengthen the team of officers under the soil & water conservation section of the Forests, environment and Wildlife Department for taking up the activities effectively. The cost of Direction and Administration of River Valley Project Division has to be borne under this scheme. In addition, the establishment cost of 10 Block Officers, 20 Forest Guards and 4 Assistant Conservator of Forests to be directly recruited during the 10<sup>th</sup>. Five Year Plan is to be met from this scheme. The Statistical Cell of Land Use and Environment Wing of the Department has to be computerised for creation of database of individual watersheds.



## **2. Soil conservation in the Watershed Areas**

**Annual Plan 2004-2005:Rs. 23.03 Lakhs**

**Physical target (Afforestation) :75.00 Ha.**

**Engineering Works :2,000 Cubic Metres.**

The vulnerable areas in all the identified watersheds have been identified in the entire State and these areas are required to be treated with a package of measures involving afforestation, land management, protective works, vegetative propagation, natural regeneration and other biological measures. Apart from afforestation, it is proposed to take up protective works of biological nature. Barbed wire fencing will be provided wherever required in order to see that the biotic interferences is totally eliminated from the landslide prone areas. It has been proposed to take up afforestation and other biological measures in 900 Ha. of degraded forest areas in 30 identified micro-watersheds. Low cost engineering measures to the tune of 36,000 are to be carried out to check landslides in these watershed To carry out that above activities.

## **3. Other Expenditure**

### **(i) Wages**

**Annual Plan 2004-2005:Rs. 4.68 Lakhs**

For payment of wages of the Muster Roll Workers in Land Use and environment Head Office, an amount of Rs. 3.15 lakhs for the year 2003-2004 has been proposed.

### **(ii) Other Charges:**

**Annual Plan 2004-2005:Rs. 3.45 Lakhs**

For meeting unforeseen expenditure, Rs. 3.45 lakhs has been proposed for the Annual Plan 2004-2005.

### **(iii) Grants –in-aid to State Land Use & Environment Board**

**Annual Plan 2004-2005: Rs. 13.50 Lakhs.**

The State Land Use Environment Board was constituted in 1984, Since then, the Board has put in considerable effort towards establishing its office and to take up activities, in order to ensure the optimum & proper utilisation of land resources. The varied Board is the highest forum of Land Use Planning & co-ordination of all issues connected with scientific management of land resources. Besides, the Board is taking initiative in creating public awareness and in mobilising support for environmental protection & pollution control. An outlay of Rs. 10.65 lakhs has been proposed in the Annual Plan 2003-2004.

**Abstract of Annual Plan 2004-2005**  
**Sector : Soil and Water Conservation**

Sl. No.	Name of Scheme	10 <sup>th</sup> Five Year Plan			Annual Plan 2003-2004		
		Physical		Financial	Physical		Financial
		Cubic Metres	Area in Ha.	Rupees in Lakhs	Cubic Metres	Area in Ha.	Rupees in Lakhs
1	Direction & Administration	-	-	250.00	-	-	35.34
3	Soil Conservation in Watershed Areas	36,000	900	540.00	500	75	23.03
6	Extension & Training	-	-	7.00	-	-	-
7	Other Expenditure						
	(I) Wages			-			4.68
	(ii) Other Charges			-			3.45
	(II) Grant -in-aid to SLUB	-	-	15.00	-	-	13.50
	<b>TOTAL:</b>	<b>47,000</b>	<b>1,534</b>	<b>1,000.00</b>	<b>500</b>	<b>75</b>	<b>80.00</b>

**ECOLOGY & ENVIRONMENT**  
**PROPOSAL FOR THE ANNUAL PLAN 2004-2005**

Ecology & Environment programme in Sikkim envisages ecological restoration of fragile ecosystem and the control & abatement of air and water pollution in a scientific manner. The main thrust is on integrating various development activities having a bearing on the ecological balance and the potential resources of the areas, through the biological and light engineering measures with a multidisciplinary approach. The rapid urbanization and the increasing population of the locality has been causing a threat to the ambient air & Water quality of these towns. As such, regular monitoring of pollution parameters is must to minimize them effectively in the successive years. Eco-Development programme has been concentrated in urban areas and an eco-park for recreational purpose.

**SIZE OF THE PLAN :**

**Financial : 30.00 Lakhs**

**1. DIRECTION & ADMINISTRATION**

**Annual Plan 2004-2005:Rs. 14.25 Lakhs**

A provision of Rs. 16.50 lakhs has been projected under Direction & Administration to meet up the probable expenditure on account of establishment viz: Salaries, Traveling Allowances Motor Vehicle and Office expenses including the purchase of computer set etc. in Environment Pollution Control Division.

**2. WET LAND CONSERVATION**

**Annual Plan 2004-2005 Rs. 8.10 Lakhs**

The Wet Land areas in the form of lake and other water bodies. Located in higher altitude, acts as a source of water supply for all the living beings. In view of the ecological and environmental importance of the region, efforts has been made towards the implementation of conservation measures of this areas by providing necessary protection. Suitable Silviculture treatment and supplementing the stock by artificial regeneration. The salvation of lake in high altitude areas is the primary objective to keep such water bodies in its original shape and sizes. For this purpose, silt detention structure is required to be constructed all around the lake so that the silt is checked from going down into the lake. The cleaning and removing of the siltation from the lakes is the next operation to execute salvation work manually. There are number of lake in Sikkim, out of which, 150 numbers have been identified so far. The programme shall be implemented all over the areas under North, South, West and East District.

**3. TREATMENT OF CATCHMENT AREAS OF URBAN DRINKING WATER SUPPLY**

**Annual Plan 2004-2005:Rs. 3.22 Lakhs**

This scheme aims at the restoration of degraded catchment areas of water sources for supply of drinking water to the urban areas. Rateychu forms the major water source for supply of drinking water to Gangtok and the neighbouring areas. Apart from this, other catchment areas of water sources located in South, West and North District have been proposed to be taken up during this plan period.

**4. ECO-DEVELOPMENT OF URBAN AREAS**

**Annual Plan 2004-2005:Rs. 0.61 Lakhs**

This is a programme proposed to be carried out in urban townships and other such areas for creation of green belt with an object to provide sink for CO<sub>2</sub>, city-noise and also to provide aesthetic beauty of the surroundings. The programme includes the landscaping, beautification, plantation of ornamental plants and pollution tolerant species, creation of Eco-Park etc., which will be undertaken as per the site condition.

**5. J.N.BOTANICAL GARDEN AT RUMTEK**

**Annual Plan 2004-2005:Rs.3.82 Lakhs**

This programme consists of propagation and ex-situ conservation of several varieties of Orchids, Rhododendrons and associate plants with an aim to educate the people about the richness of the floral wealth of the Eastern Himalayas. This garden has also become a tourist spot. The proposed developmental activities includes extension of garden, renovation of existing glass houses, landscaping, turfing, construction of bridle path, toiletries, resting sheds, compound fencing and purchase of tools & equipments etc. required for upkeep of the garden.

**Abstract of Annual Plan 2004-05**  
**Sector: Ecology And Environment**

Sl. No.	Name of Scheme	10 <sup>th</sup> Five Year Plan			Annual Plan 2004-2005			Remarks
		Physical		Financial	Physical		Financial	
		Cubic Metres	Area in Ha.	Rupees in Lakhs	Cubic Metres	Area in Ha.	Rupees in Lakhs	
1	Direction & Administration	-	-	90.00	-	-	14.25	
3	Wetland Conservation	638	244	83.00	-	35	8.10	
4	Treatment Catchment Areas of Urban Drinking Water Supply	508	127	66.00	-	14	3.22	
7	Eco Development of Urban Areas	-	18	50.00	-	-	0.61	
8	Jawaharlal Nehru Botanical Garden at Rumtek	-	-	74.00	-	-	3.82	
	<b>TOTAL:</b>	<b>1568</b>	<b>467</b>	<b>500.00</b>	<b>128</b>	<b>49</b>	<b>30.00</b>	