

**1. Project Title** : Applications of Remote Sensing and GIS in Sericulture Development.

**2. Scope and Objectives:**

Sericulture is one of the important sectors of economy in India and plays an important role in programmes of poverty alleviation. Indian sericulture is an age old practice, producing all four types of natural silk namely mulberry, tasar, eri and muga. But sericulture production is still limited to a few pockets in our country and there was sharp decline in mulberry area in some states like Andhra Pradesh Tamil Nadu. The current production (about 17 thousands tones) is not adequate to meet the demand for silk in the country. There is tremendous scope for increase the area under silkworm food plants along with improved method of information collection, processing and dissemination, in addition to use of biotechnology.

Central Silk Board (CSB), Ministry of Textiles, Government of India has been pursuing the application of satellite remote sensing for sericulture development ever since the launch of the first operational remote sensing satellite, IRS-1A in 1988. CSB and ISRO in collaboration with the concerned States Sericulture/Textiles Departments applied the technology of remote sensing (RS) and geographical information system (GIS) for mulberry acreage estimation, garden condition assessment and for finding suitable areas for introducing sericulture in the non-traditional States. Considering availability of improved resolving power of IRS satellites and information detail required for planning purposes CSB has proposed to take up the project which aims at achieving the following objectives-

- i) The following non-traditional sericulture States are planned to be covered under the sub- sub-project - *Identification of additional potential areas for development of silkworm food plants*: All NER States including Sikkim ( 8 states), Bihar, Chattishgarh, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Uttarakhand, and Uttar Pradesh.
- ii) A few selected areas / districts (as per the choice of CSB) in the four sericulture zones will be covered under the sub-theme *appraisal survey*.
- iii) About 50 intensive sericulture-practicing districts (based on the number of sericulturists or the area under sericulture) will be covered under the sub-project SILKS (Sericulture Information Linkages and Knowledge System).

**3. Centre:** North Eastern Space applications Centre, Umiam, Meghalaya in collaboration with State Remote sensing Applications Centre/ State Space Application Centres.

**4. Funding Agency** : Central Silk Board (CSB)

**5. Study Area** : 23 states of the country

**6. Brief Methodology** : Methodology to be followed in the project is briefly outlined below-

- Block or District-wise estimates will be made for areas suitable for developing silkworm food plants with spatial location and extent. This will be accompanied by a set of maps

on 1:50,000 scale. Reports summarizing the area estimates and names of group of villages (*Panchayats*), blocks / taluks suitable for sericulture in each district.

- Appraisal survey on the progress of sericulture development in the selected areas will be made following standard classification and change detection algorithm
- A network of 50 SILKS, in the major sericulture districts of NER States and other intensive sericulture districts of the country will be created in the lines of APIB (Agricultural Planning and Information Bank) developed by NESAC and now available at <http://www.Meghapib.nic.in>

**7. Data Used** : IRS P6 LISS III  
Meteorological data, Soil Data etc.

**8. Present status of the Project:** Under this project, technical guidelines and procedure manual has been prepared. Initially mapping of potential areas for mulberry and non-mulberry silkworm food plants has been taken up in 19 non- traditional sericulture states including 8 north eastern states. State Remote Sensing Applications Centres have been carrying out the mapping of potential areas for mulberry and non-mulberry sericulture in their respective state in support of Directorate of Sericulture. Mapping of potential areas for mulberry and non-mulberry sericulture has been completed in three states viz., Maharashtra, Mizoram and Kerala. These states are now working on development of Sericulture Information Linkages and Knowledge System (SILKS) for selected districts. A prototype SILKS has already been developed at NESAC for East Garo Hills of Meghalaya. The project is progressing as per schedule.

**9. Utilization:** The beneficiaries of the project output include sericulture extension officials, farmers / sericulturists at the grass-root level, Self-Help Groups, financial institutions like Banks and Co-operative Societies, State Sericulture Directorates, Regional Development Offices and Central Research Laboratories / Institutes of Central Silk Board (CSB).

**10. Duration:** 5 years (2007-2012)