

Project Details: NAeG/14-15/00021

Project id -	NAeG/14-15/00021
Name of The Project	Applications of Remote Sensing and GIS Technology in Sericulture Development
Category of Award Applying for	Innovative use of GIS Technology in eGovernance
Date of Launch	14-06-2013
Summary/Objective of the project	<p>The key objective of the project is to improve productive area in sericulture by development of silkworm food plant leading to enhanced silk production in the country. The project has generated suitable productive potential area maps in selected districts on mulberry, eri, muga and tasar sectors. Soil mapping using Remote Sensing and GIS information has been applied for sericulture suitability findings and by integrating soil & climate suitability for enhanced silkworm food plants and silkworm growth. Pursuant to this GIS use, silk growth has been witnessed which has resulted in promotion of livelihood opportunities for poor tribals, especially, women. Waste cultivable land evaluation for suitability for sericulture has increased land usage for productive and livelihood promotion opportunity creation. The project is designed as an ICT based single window tool for dissemination via Sericulture Information Linkage Knowledge System (SILKS) for the planners, field staff and poor farmers practising sericulture. SILKS has been developed for all the 8 North eastern states of Arunachal Pradesh, Assam, Manipur, Mizoram, Nagaland, Tripura, Sikkim covering 41 districts. North Eastern region of our country has many inaccessible areas and difficult to survey by conventional techniques. Hence, Satellite Remote Sensing (SRS) and Global Positioning system (GPS) were used for data collection and synthesis in the GIS environment leading to development of Sericulture Information Linkages & Knowledge System -SILKS. SILKS is a single window information and advisory services system for the planners, administrators and farmers practising sericulture. Spatial Modules of information on the natural resources, navigable maps depicting suitable areas for sericulture and advisories based on GIS facilities are provided and placed under menu driven queries. SILKS is targeted for planners in facilitating delineation of geographical areas with optimised resources conducive for development of sericulture. Information on best practices for sericulture activities and existing facilities, schemes, disease forecasting and forewarning, sericulture marketing under non-spatial information are suitably packed in 20 modules i.e.16 non-spatial and 4 spatial. They are grouped into four categories, namely Planning Services, Farmers Services, Other Services and Natural Resources Management. The available modules under Planning Services are potential areas suitable for developing sericulture, Silkworm Food Plant Production Technologies, Techniques of Silkworm Rearing, Diseases and Pest Management of Silkworm Food Plants, Improved Varieties of Silkworm Food Plants, Species of Silkworm, Processing of Cocoons, Infrastructure and Equipments and Allied Sectors and Occupations. The Other Services has modules like Micro Credit and Self Help Groups, Sericulture Marketing, Seed Distribution Centres, Weaving Reeling Centres and Schemes & Grants for Farmers. SILKS is also targeted for farmers. Under Farmer Services, three modules viz. weather agro-advisory and forewarning is periodically disseminated in local languages by linking to Indian Meteorological Department(IMD)District Agromet Advisory Services(DAAS). Disease forewarning and support services have been brought out in six local languages viz: Assamese, Mizo, Manipuri, Kasi & Garo, Nagamese and Bengali provide useful technology tips for successful cropping, district specific information, forward and backward linkage needs. Through SMS service, sericulture advisories have also been disseminated to 4050 farmers. SILKS is a multi focused product targeted for planners, field staff and farmers all in one. However, all the identified potential area land holders of wastelands covering 41 districts of eight North Eastern states are the prospective beneficiaries. Findings on suitability have also benefited the eight North Eastern state sericulture departments in planning their development programmes. Direct beneficiaries are farmers who have taken new silkworm food plantation. Also, all the 41 District Sericulture Officers and their technical staff have been empowered with useful potential area maps. Through hands-on-trainings, skills upgraded to identify new plantation areas on these maps. The project has benefited several sericulturists with useful data on waste land suitability maps for sericulture through Satellite Remote Sensing (SRS) applications. Cultivable waste land of 731858 ha of has been found highly suitable for sericulture. Sector-wise, an area of 100926 ha for mulberry, 310335 ha for muga, 188086 ha for eri and 132511 ha for temperate tasar were found to be highly suitable. Based on feedback,10879 acres of additional area covered with sericulture</p>
Beneficiary of the project	

plantation since 2012 in North Eastern states and 8983 farmers took up plantation thus sericulture has been proved as a livelihood option in the project area. Productivity has increased by 30.37 kg/ha with eri sericulturists and 35.5% increase has been recorded in overall silk production in North Eastern states during 2013-14 compared to 2012-13. Since the trial run began using potential area maps in 2012, an overall increase in silk production of 39.64% has been recorded till 2013-14. Through SMS service, the weather advisory has been disseminated to 1685 farmers of Assam, 99 from in Mizoram, 33 in Meghalaya, 82 in Tripura and 13 in Nagaland

Details of Project Head

Name	Ishita Roy
Designation	Member Secretary
Gender	Female
Address	Central Silk board, Ministry of textiles Government of India ,CSB Complex Madiwala, Banagalore
Pincode	560068
State	Karnataka
Phone Number	08026680190
Mobile Number	9483532434
Email-ID	ms.csb@nic.in

Details of team members, if any, other than Project Head:-

Name(1st team member)	prabhakar C J
Designation(1st team member)	Scientist D
Name(2nd team member)	
Designation(2nd team member)	
Name(3rd team member)	
Designation(3rd team member)	
Name(4th team member)	
Designation(4th team member)	
Name(5th team member)	
Designation(5th team member)	
Name(6th team member)	
Designation(6th team member)	

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Supporting documents:-