

**1. Project Title** : Habitat mapping and identification of corridors for the movement of elephant using remote sensing and GIS in selective site of Assam

**2. Scope and Objectives:**

Garbhanga and Rani Reserve Forest in Assam are important habitats of the elephant. In the recent years there is a threat to these habitats due to encroachment as well as the deforestation taking place in and around these areas. Increasing pressure of human population has also resulted in depletion, degradation and fragmentation of habitats and loss of corridors. This study area has been found to be repeatedly facing the problem of man-elephant conflict and prone to accidents due to a railway line passing by the side of Deepar Beel wetland and the adjoining Reserve Forest. Therefore, there is an urgent need for finding out suitable habitat and safe passages (corridors) for the elephant. The conventional survey techniques cannot be efficiently used in the rugged terrain of North East and hence it was proposed to develop an RS and GIS based approach.

The objectives of this project are:

- i) To map vegetation type and forest cover/density
- ii) To map the existing elephant habitats
- iii) To identify potentials elephant corridors

**3. Centre** : North Eastern Space applications Centre, Umiam , Meghalaya

**4. Funding Agency** : EOAM/ Dept. of Space

**5. Study Area** : Garbhanga and Rani Reserve Forest in Assam

**6. Brief Methodology** : The methodology involves an integrated approach of visual interpretation and machine processing of high resolution satellite data (IRS P6 LISS IV in combination with LISS III.) IRS P6 LISS IV images were used to delineate different forest types and forest density and water bodies. Habitat suitability and elephant corridor favourable for elephant passage will be identified based on the water availability, fodder and forest cover in the study area. A detail study on plant species composition will be carried out in order to find out elephant food habit and the carrying capacity in the reserves.

**7. Data Used** : IRS P6 LISS-III (2000)  
IRS P6 LISS-IV (MX) (2006 & 2009)

**8. Status of the Project** : On going

**9. Utilization of the project output:** The output of the project will be used by Forest department of Assam in addressing the problem of man-elephant conflict and take appropriate action in the areas prone to accidents due to a railway line passing by the side of Deepar Beel wetland and the adjoining Reserve Forest.

**10. Duration** : 2007 to 2011