

## **Project Update: July 2007**

The first two objectives of this research activity rely on survey of elephants and their habitats in Mozambique Central Ecosystem. For these objectives we contacted the National Land Directorate, National Center of Climatology, National Directorate of Water Resources, National Institute of Agriculture and Forest, National Institute of Statistics and National Center of Remote Sensing to acquire topographic maps, climatic data, hydrologic data, soil data, census tracks and Landsat 7, Quickbird satellite imageries, respectively.

We are georeferencing topographic sketch-maps from geographic coordinates (North America 1961) to Universal Transversa Mercator coordinates (WGS 84, zone 36S) basing on national quadtree. From topographic maps important data such as villages, roads, swamps, rivers, contours and altitude is being digitized. For Chemba District we have already computed the Triangular Irregular Network Model and combined with villages, roads and swamps feature classes, it will assist us on base maps production. Base maps will be used for field survey, since they show the altitude gradient and slope percent where transects and quadrats will be placed. Coordinates derived from cartographic evaluation will also be used as control points for georeferencing satellite imageries.

Common spatial reference and topological relationship for all spatial data are being enforced by the geodatabase building process in ArcInfo. This geodatabase is structured by feature datasets including vegetation, elephants, water, land use, land cover, protected areas, habitats, infrastructure, settlements, administrative boundaries, damages, topography.

Sincerely, we are grateful of RSG support without it even the acquisition of digital topographic maps would be practical impossible.