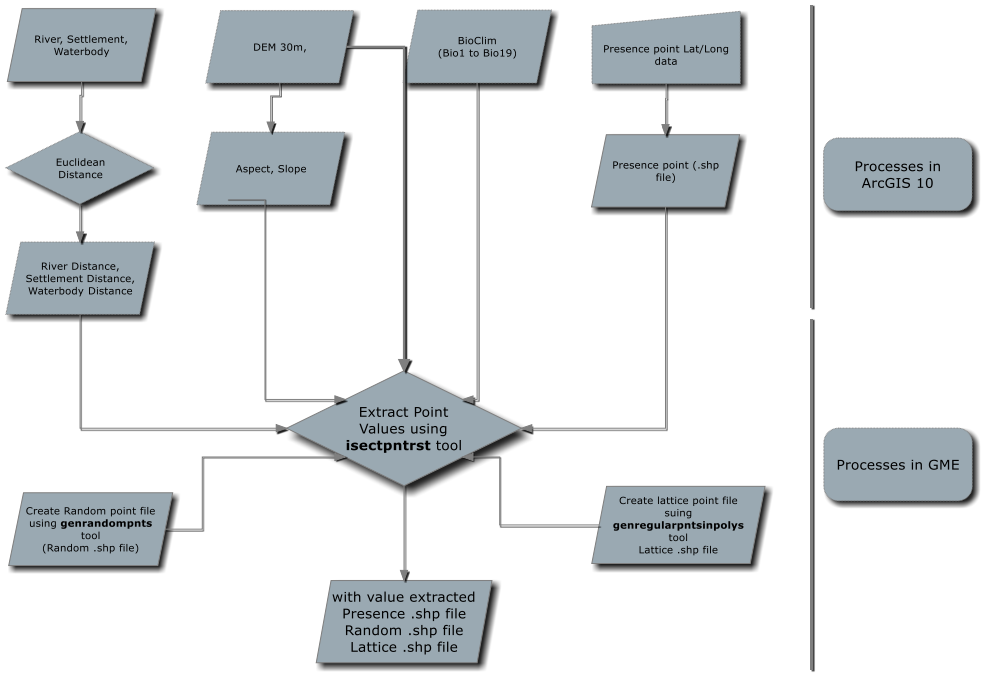
Project Update: April 2012

Objective 1: Predictive distribution modeling of Cheer Pheasant in Nepal

Activities taken so far:
Different data are collected from different sources. In this study *viz* bioclimatic data (www.bioclim.org) from bio1 to bio19 are collected and masked with boundary of Nepal. Similarly, Digital Elevation Model 30m resolution was downloaded from USGS site and masked with Nepal boundary. Different errors in DEM were fixed with DEM created from 20m and 40m contours using append tool in ArcGIS 10. The corrected DEM was used to prepare aspect map and slope map.

Different vector data such as river, water body (such as lakes), and settlement data were used in this study. These vector data were used to estimate the Euclidean distance using Euclidean Distance tool in Spatial Analysis toolbox in ArcGIS. Then all those maps were projected to GCS_WGS_1984. Then the presence points were plotted in ArcGIS in same projection system.

The methodological flow chart:



Now, we have all the data layers handy and next, we will model our data to deal with the distribution. Soon the model is produced; we will perform the field visit to validate the model and ground truthing.

Objective 2: Occupancy of cheer pheasant in Western Nepal.

Once distribution model is produced, we will design the field survey in agreement with occupancy and will carry out the repeated detection/non-detection surveys to model the occupancy of cheer pheasant in Western Nepal. We are planning to leave for field in 2nd week of May.

Data Acquisition

Data	Source	Remark
Rivers, water body, settlement, contour	Department of Survey, Government of Nepal	1:25,000 scale, in vector .shp file
DEM	USGS http://gdex.cr.usgs.gov/gdex/	ASTER Global Digital Elevation Model Version 2 30m resolution
Slope, Aspect	Derived from DEM	
Bioclimatic data	www.bioclim.com	
Cheer Pheasant Presence only data	Review of available literature	Acharya, R. 2004 Acharya R.S., S. Thapa, and Y. Ghimirey 2006 Budthapa B. 2006 Singh P.B. and S. KC 2008 Singh P.B., L.P. Poudyal and S. Sharma. 2006 Singh P.B., P. Subedi, P.J. Garson and L. Poudyal 2011 Subedi P 2003 Subedi P 2009