were collected by way of a detailed set of questionnaires following RRA method (Sankaran *et al.* 2000) and therefore quantities of forest-based biomass harvest reported here are not based on direct measurements in the field. The information on the forest-based plant species and its quantities extracted by a household during the previous year were collected.

At least five percent of households in each surveyed village/hamlet were sampled. A total of 134 household level interviews (Angamis 33; Apatanis 33; Nishis 30; Mizos 38) were conducted in Aizwal, Kohima and Lower Subansiri districts of the Northeast India. All households interviewed by us, irrespective of their profession, were involved in some level of forest-based plant biomass gatherings.

Study Area

Northeast India harbours highest diversity of fresh water turtles in the world, supports 13,500 species of plants, 1,170 species of birds, 329 species of mammals, 484 species of reptiles and 202 species of amphibians. About 52% of floral, 12% avian, 22% mammalian, 42% reptilian and 56% amphibian species are endemic to the region (CI 2002). Endemism among birds in the region is higher than among mammals. Despite comparatively lower avian endemicity, the region harbors several species that are represented by globally significant populations. Many of the animal species occurring in the study area are of conservation concern (see IUCN 2003; Birdlife International 2004)

The region harbours the highest forest cover in the country but is also experiencing forest cover losses to the tune of 31,700 ha annually, mainly due to shifting cultivation. Shifting cultivation still remains the main source of livelihood for most hill indigenous communities. On average, 3,869 km^2 is put under shifting cultivation annually, and an estimated 443,336 households earn their livelihood from this practice. Hunting continued at unchecked scale in the region. Several indigenous communities hunt wild animal both for subsistence and sale. Wild meat contributes significantly in the household economies

Data Analysis

The information on the intensity of forest-based plant biomass harvest by each household was produced by estimating per unit quantities of each plant produce removal per annum. The growing stock (fuelwood and timber) productions in the forest areas inhabited by Angamis and Apatanis were estimated following Anon (1996). According to Anon (1995), average growing stock in the forests of Nagaland (> 10% forest cover density) is 66.1 m^3/ha with an annual increment of 1.33 m^3/ha. On an average 30% of growing stock is available as fuelwood and rest as timber, although this may vary from species to species (Anon 1996). Therefore, 0.4 m^3/ha is available as fuelwood and 0.93 m^3/ha as timber out of annual production.

The stock volume available for fuelwood harvest/ha/annum was converted into dry weight through a conversion factor (1.5 m^3 = 1 tonne) following Shankar *et al.* (1998). The timber and fuelwood extraction rates (unit quantity/ha) of a household were divided by its forestland holding from where this particular household extracted timber and fuelwood for its use. Thus, the investigator was able to calculate growing stock production in the forest areas inhabited by Angamis. Similarly, growing stock productions in the forests owned and managed by Apatanis were calculated.

The impacts of extractor's age and educational status on his/her forest biomass harvests were examined using Pearson's correlation coefficient. The impacts of occupations of indigenous ethnic communities on their forest biomass extraction rates were investigated using Kruskal-Wallis test. All data, wherever appropriate, were normalized following standard normalization methods and statistical procedures were applied following (Sokal & Rohlf 1991).