

## Country Course on Small Area Estimation, Paro, Bhutan, 16-20 November 2009

The Country Course entitled as “Small Area Estimation” was conducted in Paro, Bhutan from 16 to 20 November 2009 in collaboration with National Statistical Bureau (NSB) of Bhutan under SIAP’s outreach training programme. A total of 22 participants from the NSB of Bhutan as well as from various line-ministries such as the Ministry of Education, Ministry of Health, Ministry of Finance, Ministry of Labour, Royal Civil Service Commission, Thimphu City Corporation, Ministry of Information and Communication and Cross National Happiness Commission of Bhutan participated in the training course.



The main objective of the course was to provide participants with basic theoretical knowledge on methods of small area estimation. The main topics of the course were: users for small area estimation, introduction to STATA software, choice of small area techniques, broad area ratio estimator (BARE), broad area ratio estimator without auxiliary data (BARE\_NAD), broad area ratio estimator with auxiliary data (BARE\_AD), introduction to “Grid Square” method, regression based models (RBM), regression based models – Area level models, regression based models – Unit level models, diagnostics for the quality of small area estimation, basic conditions for success and trade-off between quality, cost, time and efforts.

The training materials were prepared using guidelines prepared by the Australian Bureau of Statistics (ABS) and Statistical Bureau of Japan on the methods of small area estimation.

The course end evaluation done by the participants, indicated that majority of them found that the training on small area estimation was an effective course towards enriching their knowledge in the methods of small area estimation as well as developing skills in practical application of these methods.