#### 12th Set of Grants, June 2006

### Reducing Vulnerability against Natural Disasters: a study of risk coping behaviour of coastal communities in Sundarban, India, Prasenjit Sarkhel, India.

Coastal communities in the Sundarban Delta are highly vulnerable to hazards like tides, cyclones and floods. The degree of damage varies within different occupational groups but the government aid that follows the aftermath of disaster is largely ad hoc. Prasenjit will prepare a Local Disaster Risk Index which will rank each occupational group so that the policy makers can accordingly prioritise their relief efforts. The study will also document the mitigation efforts, coping abilities and strategies against risk across different occupational classes. Prosenjit will also examine the feasibility of augmenting the mitigation and coping capacity through different income diversifying projects designed by micro-finance organizations or self help groups.

## Evaluating the impact of Disamenity (open sewerage system) on Housing prices (rent) in Rawalpindi City, Muhammad Irfan, Pakistan

Rawalpindi, the third largest city in Pakistan, has a population of two million people. The existing sewerage system only covers about 30% of the city area but has no sewage treatment plant. In the remaining 70% of the city, raw sewage is discharged to street-side drains which ultimately discharge into the Lai Nullah, the main drain which passes through entire city. The objective of this study is to estimate the benefit of resident (tenant) from ground sewerage system. In this study, Irfan examines the impact of open sewerage system as a negative externality (disamenity value due to foul from open sewers) on house rent. The study will also estimate how much the household is willing to pay for improved sanitary conditions (from open sewerage system to ground sewerage systems) and how much abatement expenditures they undertake. This will be an important input for policy makers to determine financial feasibility for such a project.

#### Transactions Costs and Innovations of New Institutions in Community-based Water Resource Management in Nepal, Ram Chandra Bhattarai, Nepal (Study Grant)

The experience of local community cooperation in water management in South Asia is mixed. Ramchandra will analyze the evolution of formal water users association (WUAs) in selected irrigation systems of Nepal. The study will examine how nature and structure of transaction costs would determine or shape the a formal WUA in the case of community managed irrigation system based on field studies in two districts in Kathmandu valley. Additionally, it will look at the distribution of transaction costs among different socio-economic groups and its relative importance as compared to costs for individual households.

# An Ecosystem Approach to a Renewable Resource Management: Incorporating Biological and Socio-Economic Aspects into Fishery Management, Susmita Sahu, India (Study Grant)

The resource management of a renewable resource like fishery, to be sustainable, requires integration of ecological and economic components. Susmita intends to develop a bio-economic model for the Bhitarkanika National Sanctuary, Orissa, India in the context of local property rights over fish harvest and mangrove management. The study attempts to optimise incomes by re-allocating labour between extraction of NTFP from mangroves and fishery effort in the national park area.