

### **Scales of Relative Importance and Damage Schedules: A Non-Monetary Valuation Approach for Natural Resource Management.**

The damage schedule framework was applied as an analytical protocol to assess communities' valuation of environmental resources. The study was an empirical test of the feasibility of developing damage schedules using two coastal areas of Thailand, Ban Don Bay and Phangnga Bay. The objectives of this research included (a) investigating the ability of people to provide judgements about the relative importance of resources, (b) examining how this information could be used to derive scales of relative importance, and (c) developing the damage schedules based on these importance scales. A questionnaire containing series of paired comparison questions was used as a survey instrument. About 200 people were surveyed for each study area. These included 'formal experts', such as researchers, policy makers and administrators, and 'layexperts', such as resource users, other stakeholders, and people living in the study areas. The first part of the questionnaire presented pairs of resource losses (e.g. damage to coral reefs, loss of mangrove forests), while loss-causing activities (e.g. an oil spill, shrimp farming) were paired in the second part of the questionnaire. For a series of these pairs, respondents were asked to indicate which member within each pair was more important. The results showed a significant agreement in the rankings of importance of resource losses and activities provided by all respondents in each study area. Agreement in the rankings was found between formal experts and layexperts and among layexperts of different occupations. Intransitive responses occurred but did not have a significant effect on the resulting scale values and rankings. Comparison between the damage schedules of the two areas supported the underlying assumption that people could make judgements on the relative importance of different losses and could provide meaningful rankings that reflect community values. The damage schedules can be adjusted over time as losses or activities of different magnitude occur, by interpolating or extrapolating from the initial scale values. Damage schedules, apart from providing predictability and enforceability in the damage payments, can also be developed quickly and at lower cost than current valuation methods.