Integrated Natural Resource Management (INRM) requires site-specific understanding of tradeoffs between and among the goods and services that trees in agro-ecosystems can provide. ICRAF in SE Asia has developed a negotiation support toolbox consisting of tools for rapid appraisal of landscape, tenure conflict, market, hydrology, agrobiodiversity and carbon stocks, and simulation models for tree and crop interaction at the plot level and landscape dynamics. Local resource managers in national institutions need access to cost-effective, replicable tools and approaches to appraise the likely impacts of new technologies and changes in market access and to support evidence-based negotiations of contentious issues. However, prior to wider applicability, there are needs for:

1. Cost-effectiveness tests of the toolbox under a wide range of agroforestry contexts in SE Asia conducted by the local institutions,
2. Capacity enhancement of national institutions to use these tools.

Approach of the project

The project aims to:
- bridge perception gaps between stakeholders (local, public/policy and scientific knowledge paradigms),
- increase recognition and respect for these multiple knowledge systems,
- provide quantification of tradeoffs between economic and environmental impacts at landscape scale, and
- enable joint analysis of plausible scenarios based on available data and information.

Selected national partners from NARS and universities will actively participate in testing the use of the toolbox across frontiers where 'new agroforestry technology' or 'new infrastructure/market access' are the primary driver of change, and across concerns for water, biodiversity and carbon stocks as key environmental services. The focal locations are proposed on the basis of urgent local issues (conflicts over natural resources potentially linked to agroforestry solutions, 'new' technologies).
Initial appraisal of agroforestry in multifunctional landscape mosaics

**Tree, AF-technology & Market**
- **RAFT:** Agroforestry systems & technology
- **RMA:** Market access
- **Tree*Site matching**
- **Databases:**
  - AFtree & seed supply
  - Wood density
  - PAM
  - Local ecological knowledge
- **Models:**
  - **FBA:** tree architecture
  - **WaNuLCAS:** Tree-soil-crop interactions
  - **SExI-FS:** mixed tree stands
  - **Adopt & learn**

**Landscape**
- **RHA:** Watershed functions
- **RALMA:** Landslide risks
- **RaCSA:** Carbon stocks
- **ROSA:** Oxygen supply
- **RABA:** Agrobiodiversity
- **QBS:** Quick biodiversity survey
- **RASA:** Spatial analysis of patterns and LU change
- **Models:**
  - **GenRiver & SpatRain:** Hydrology
  - **Fallow:** Landscape scenarios

**Governance**
- **RaTA:** Tenure claims
- **WNoTree:** Constraint analysis
- **FERVA:** Fair & efficient value chains
- **NSS:** Negotiation support process
- **Scenario tools:**

**Impact pathways**
- Project cycle learning
- Technology Adoption
- Quantitative impacts

Text under development