PEN research questions and themes

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PEN workshop, Barcelona, 8-12 January 2004

What is a (good) research question?

- A good RQ **limits** the scope of the analysis and **structures** it
- It helps the reader – you tell them what you are going to answer. It simply makes it more interesting!
- Formulated as a question, i.e., has a **question mark**
- Sharply defined and can be answered in one sentence, possibly with '**yes**' **or** '**no**'
  - Not so good: *Which factors influence the use of forests?*
  - A better one: *Do female headed households have higher forest income?*
- The really good RQs address a **puzzle or apparent paradox**
  - contradictory impacts, or contrary to conventional wisdom
  - Example: *Why does LFM not benefit the poor?*
- **Researchable:** Can the theses answer the question, given:
  - The skills
  - The data availability and variability (e.g., enough variation in the data to test the hypotheses)
- The research matrix

Overall research question:

- What is the *current* role of forests in poverty alleviation, and can that role be enhanced through *better policy formulation and implementation*?
- What is the relationship between forest use/dependency and household income/assets in different env. and policies:
  - Household characteristics (poor, young, household headship, migrants, etc.)
  - Forest resource base: forest type and condition, degradation, forest cover
  - Local control and management, tenure, user groups
  - Economic development/modernization/market integration

RQ 1. Rural livelihoods & environmental income

a. General

1.1. What is the size and distribution of forest and environmental incomes?

1.2. How do these vary with different household and contextual variables?

1.3. Do the poor benefit from higher-value environmental products, or are they denied access to all but low-return environmental enterprises?

b. Safety nets (and trampolines)

1.4. How important are forest and environmental incomes as safety nets in response to idiosyncratic and covariate shocks?

1.5. How does reliance on natural resources for shock coping vary by season, household characteristics, and broader geographic and socioeconomic factors?

RQ 1 (cont.)

c. Gap filling

1.6. How important are forest and environmental incomes as seasonal gap fillers?

d. Pathways

1.7. How is diversification/specialization and income composition linked to wealth?

1.8. What are the roles of forests in alternative pathways out of poverty?

1.9. Do poor households use environmental income to accumulate physical and human capital and move out of poverty?

RQ 2. Land tenure, local forest management, and decentralisation

2.1. Who participates in local forest management (LFM)?

2.2. What determines degree, incidence and & effectiveness of LFM and decentralisation models?

2.3. Does collective LFM lead to higher and more equitably distributed forest incomes?

RQ 3. Market access & integration

3.1. How does better market access and integration impact forest income, dependency and distribution?

3.2. Does forest dependency tend to be reduced with economic development and increased market integration?

How forest markets operate (but limited coverage in standard questionnaire):

3.3. How efficient are forest product markets?

3.4. Are forest product markets discriminating against the poor producers?

RQ 4. Deforestation and land-use change

4.1. How does poverty and forest dependency affect rates of deforestation at household and community levels?

4.2. What have been the livelihood impacts of deforestation and forest degradation?

RQ 5. Payment for environmental services (PES)

5.1. What is the overall significance of PES on rural income? How does it compare to other forest income?

5.2. Which groups have benefited the most from PES?

Theories

- Household production models & the livelihoods framework;
- The economics of rural organization (imperfect markets and transaction costs);
- Theories of common property rights & common pool resource management;
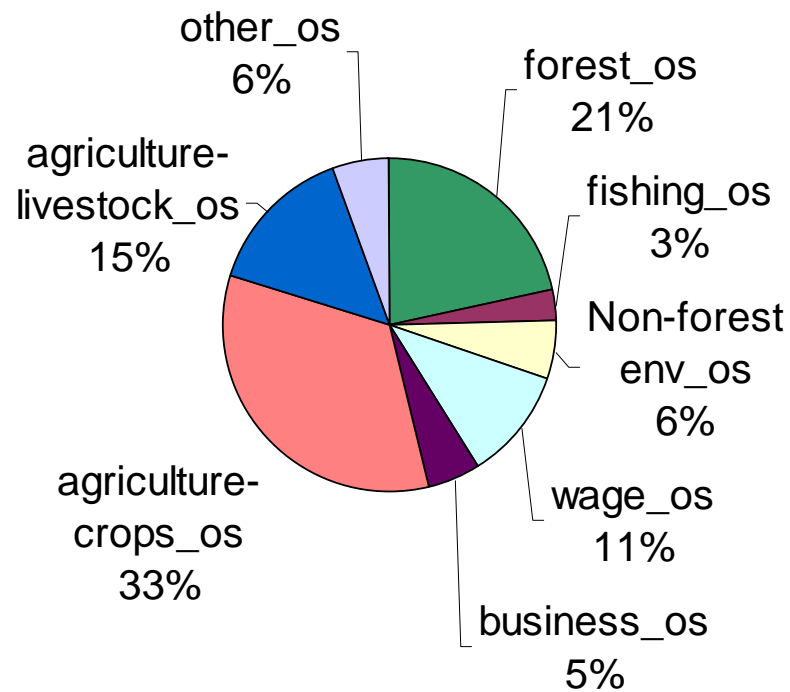- Institutional analysis

Example of methods

- Descriptive statistics, tables and cross-tabulation, significance tests
- Diversification indices (Herfindahl, Gini); measures of household market integration
- Gini coefficients and decomposition analysis
- Regression analysis in different versions
- Matching methods
- Synthesis of panel data studies in four sites
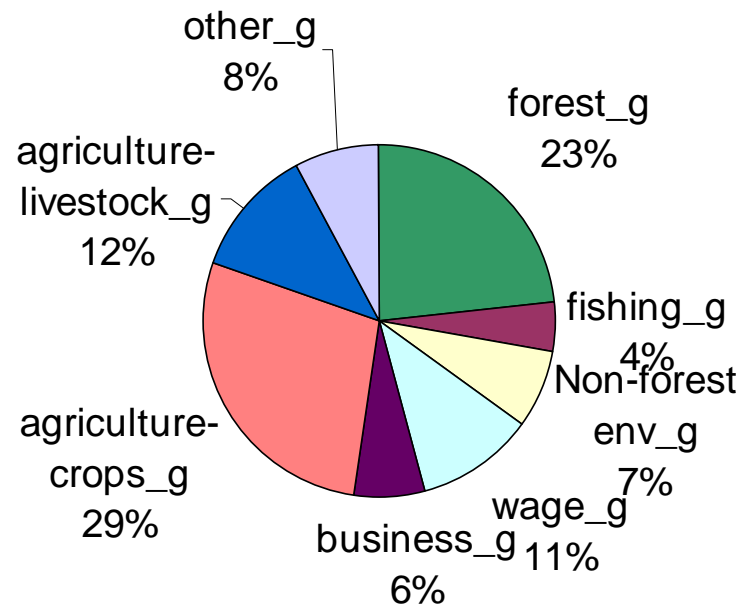- Qualitative synthesis of PEN studies

Policy relevance

- Identify gaps in national poverty surveys -- in relation to environmental income;
- Inform design of national poverty alleviation policies (e.g. PRSP) and local or regional level policy intervention in study areas
- Design of community forestry programs
- Inform devolution and LFM policy debates
- Assess impacts of infrastructure investments
- Inform market liberalization debates

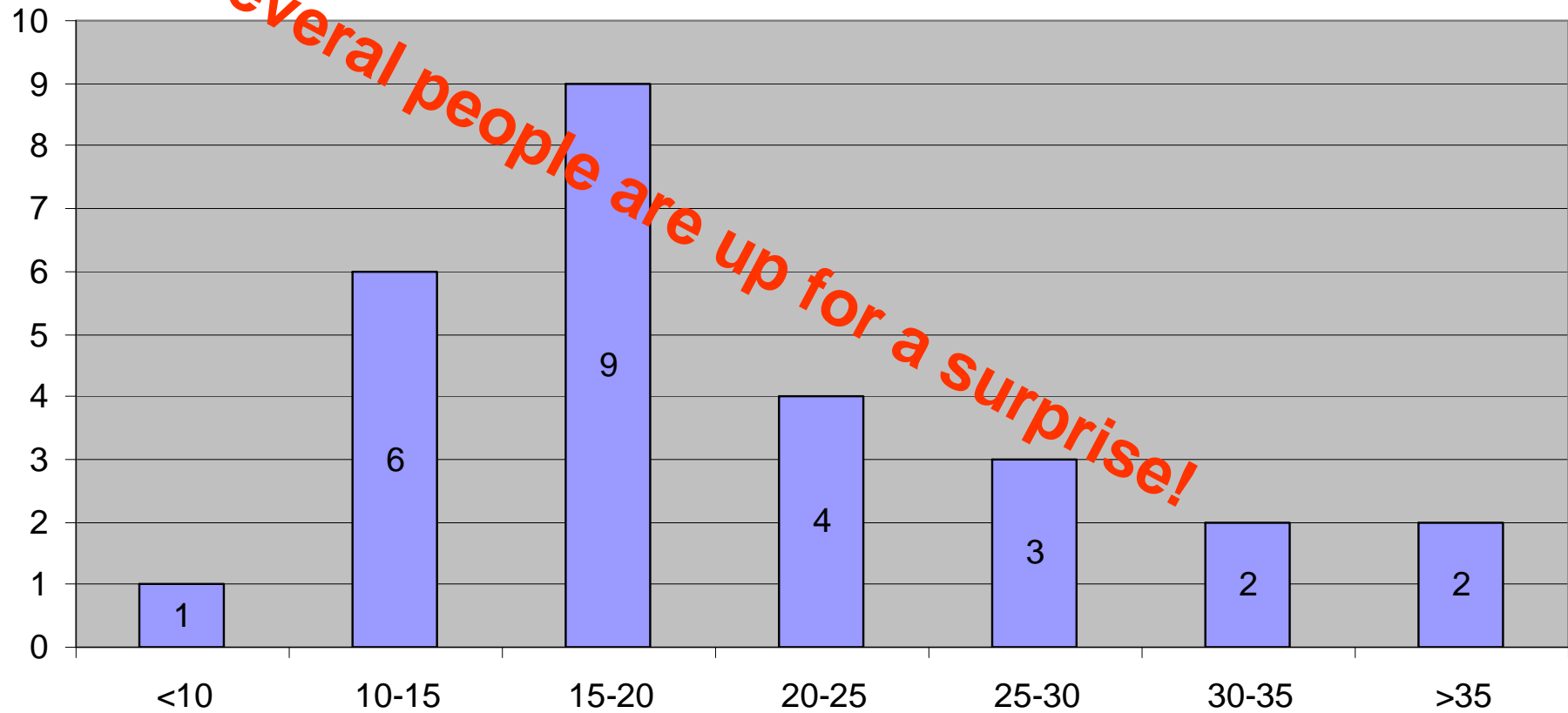# PEN prophet survey – preliminary results. N = 27 (21)

other_os
6%

forest_os
21%

agriculture-
livestock_os
15%

fishing_os
3%

Non-forest
env_os
6%

agriculture-
crops_os
33%

wage_os
11%

business_os
5%

Income shares all PEN surveys

other_g
8%

forest_g
23%

agriculture-
livestock_g
12%

fishing_g
4%

Non-forest
env_g
7%

agriculture-
crops_g
29%

wage_g
11%

business_g
6%

Forest income (global survey)

Distribution of forest income share (%)

Category	Value
<10	1
10-15	6
15-20	9
20-25	4
25-30	3
30-35	2
>35	2

Several people are up for a surprise!

Forest income share (%) for sub-groups
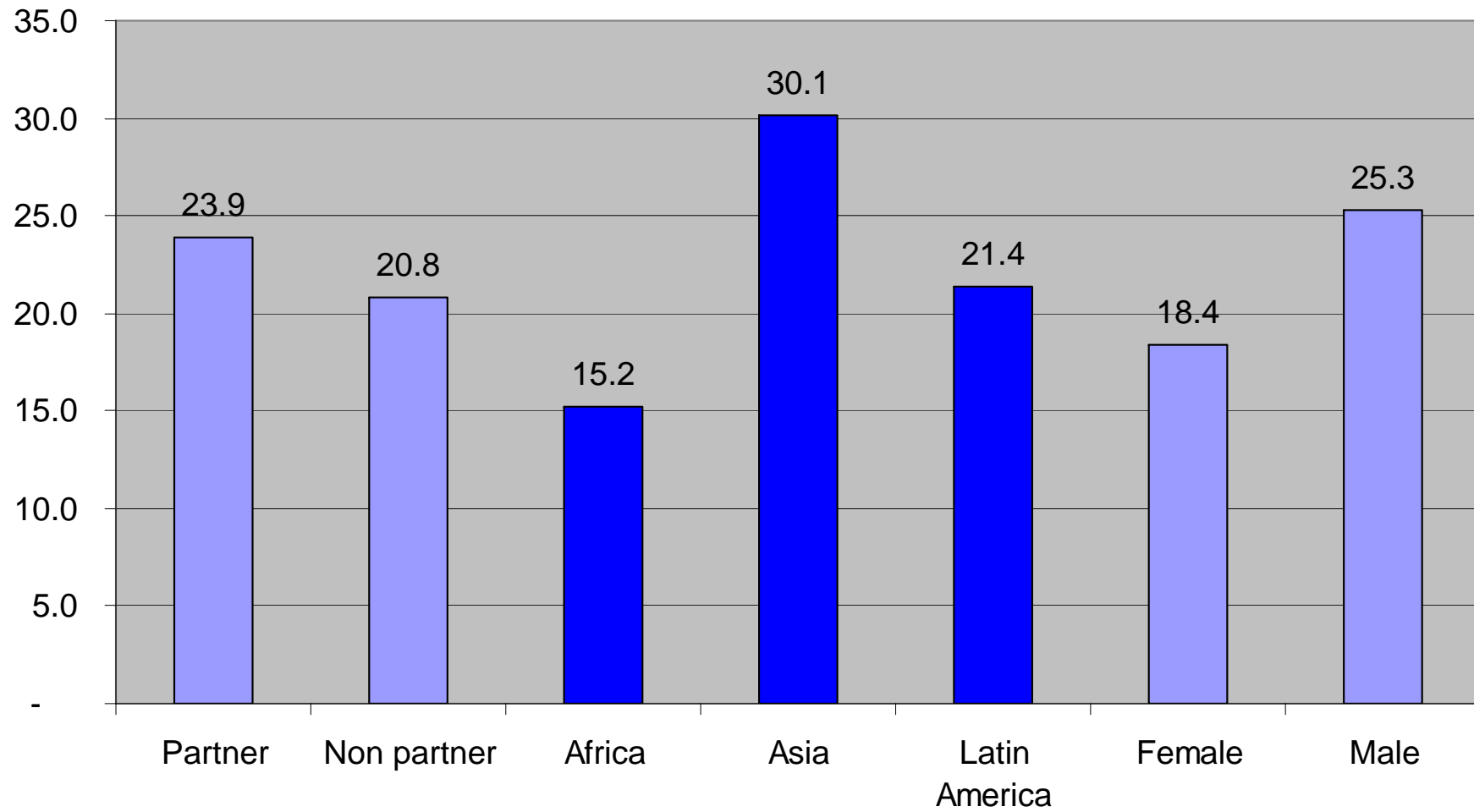
Data checking and quality

- The consistency check:
  Income shares should add up to 100%

- 3 respondents did not pass, and their household will be revisited by Dani

- One outlier (suspicious figure) will also be revisited

Who was closest to the average (using OLS method)

- Two interpretations:
1. The Preliminary PEN Prophet (PREPENPROP)
2. The most average (and boring) PEN partner

The result:

3: Viki: 67.78

2: Shiba: 60.63

1: Marieve: 29.63