The non-cash values of forests, and their importance

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What is non-cash forest income?

- Non-cash income from forests is defined as the forest products which households collect but consume/use in the home rather than selling.

- These may be fuelwood, timber, forest foods and medicines, fodder or fibre (for mat and basket-making and for aspects of house construction).

- This non-cash income is a fraction of the income drawn from forests by those who live in or near them and rely on them in part for their overall annual income from all sources – agriculture, livestock, off-farm employment or trade, and forest.
What is non-cash forest income?

• A comparative study of forest reliance conducted over the last 4 years by IUCN in 23 countries found that while levels of reliance vary greatly, they can be clustered into:

  – those with relatively **low reliance (9-18% of income drawn from forest)** who have plentiful opportunities for market engagement and for off-farm employment;
  – those with **medium reliance (25-35% of income drawn from forest)**, who rely primarily for their livelihoods on agriculture and perhaps livestock, and for whom forest is an essential complement
  – and – much rarer – forest peoples with **reliance levels of 50%** or more whose primary source of both income and subsistence is the forest itself.

• **In all these cases the non-cash income drawn from forest is more substantial than cash income**
Why does forest reliance vary?

• The extent to which people draw part of their income from forest, depends on the opportunities (or lack of them) available to them.

• Forest use is higher where there are few opportunities for off-farm employment, and where investments open to wealthier villagers, such investment in livestock or the planting of high value trees, are unavailable to poorer farmers.

• Similarly, forest use is higher in the absence of easily reachable markets.

• There is always a relationship between agricultural production and the use of forest: higher agricultural production tends to mean somewhat lower forest use.
The importance of non-cash income

- Non-cash uses of forest continue even where there are no cash sales of forest products at all.

- Across IUCN’s range of landscape sites, the value of non-cash forest income to the household is worth from two to five times more than that of forest cash income.
  - Where cash values are high (as in the Congo basin or the Papua lowlands) the ratio is around 1:2.
  - Where they are lower (Ghana, Guatemala or Western Uganda) ratios vary between 1:3 and 1:6.

- On average men sell about a third of what they collect, and the remaining two-thirds of their collection labours go to the household. Women sell about 20-25% of what they collect and the remaining 75-80% is committed to household needs.
In the remote village of Simpa, S W Ghana, only high value products are worth taking to market, while the rest are used domestically.

At all sites, a wider range of NTFPs/ NWFPs were consumed than sold.
How was the importance of forest income missed in earlier work?

- In many of the case example villages in IUCN’s work, the cash component of forest reliance is very small, 10% or less.

- Where villagers are living on $1.25-$2.00 a day or less, such sums look hardly worth bothering with: they are certainly not going to lift rural forest-dependent people out of poverty.

- It is the non-cash component of forest income which makes such a key difference to household wellbeing.

- It substitutes for what would otherwise have to be bought and supplies energy, house-building materials, nutritionally important forest foods and medicine.
How was the importance of forest income missed in earlier work?

- Cash income from forest sales is recorded (imperfectly) in Government instruments such as household budget surveys, living standards surveys and the like.
- But forest non-cash income is not recorded anywhere, though it should be, since household consumption of agricultural products is recorded and goes to help make up GDP calculations.
- In forest assessments such as FAO’s five-yearly FRA, it has proven difficult so far even to capture the value of NWFP sales, let alone the value of NWFP consumption - particularly in the light of the much greater range of products consumed than sold.
- As a result, the breadth of reliance on forests by local people has been under-observed by both Bureaux of Statistics and Forestry Departments in government, and in consequence is profoundly undervalued.
Adding the non-cash value of forests into PCI calculations

1. In 2008, per capita income in Shinyanga District, Tanzania was $374 (Stats Office).

2. But PCI includes only items 1, 3, 4, 5 in box and excludes 2 – consumption from forests - here 24%.

3. So $374 is actually only 76% of income. The full annual per capita income is $492. Average annual income from forest (cash and non-cash) amounts to 30% of all income: $148 per head.

4. For rural Shinyanga’s 277,500 inhabitants, the forest’s direct contribution to District income is thus a stunning $41 million a year – and this is in one of Tanzania’s very driest districts.
The total annual value of forest products to rural people in Uganda, in millions of dollars

<table>
<thead>
<tr>
<th>Forest Products grouped by category</th>
<th>CASH</th>
<th></th>
<th>NON-CASH</th>
<th></th>
<th>VALUE OF ALL FOREST PRODUCTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$millions</td>
<td>%</td>
<td>$millions</td>
<td>%</td>
<td>$millions</td>
<td>%</td>
</tr>
<tr>
<td>Fuel</td>
<td>406</td>
<td>10.1</td>
<td>1,186</td>
<td>29.5</td>
<td>1,592</td>
<td>39.6</td>
</tr>
<tr>
<td>Building materials</td>
<td>346</td>
<td>8.6</td>
<td>655</td>
<td>16.3</td>
<td>1,001</td>
<td>24.9</td>
</tr>
<tr>
<td>Forest Foods</td>
<td>241</td>
<td>6.0</td>
<td>510</td>
<td>12.7</td>
<td>752</td>
<td>18.7</td>
</tr>
<tr>
<td>Fibre (for ropes, baskets, matting etc)</td>
<td>68</td>
<td>1.7</td>
<td>257</td>
<td>6.4</td>
<td>326</td>
<td>8.1</td>
</tr>
<tr>
<td>Herbal medicine</td>
<td>44</td>
<td>1.1</td>
<td>145</td>
<td>3.6</td>
<td>189</td>
<td>4.7</td>
</tr>
<tr>
<td>Timber</td>
<td>32</td>
<td>0.8</td>
<td>129</td>
<td>3.2</td>
<td>161</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>$1.137 billion</td>
<td>28.3</td>
<td>$2.882 billion</td>
<td>71.7</td>
<td>$4.019 billion</td>
<td>100%</td>
</tr>
</tbody>
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Implications

• Firstly, it is clear, we have to get a better handle on the value of non-cash forest income to local people in a far wider number of places. The kind of study undertaken in Uganda for FAO, where a national figure for the value of forests to rural people can be roughly calculated is all too rare.

• Until we have more of this data, our understanding of the role of forests for rural people is weak and we are likely to make bad decisions about:
  – Appropriate conservation approaches
  – Ways of approaching REDD+
  – The role of PES
  – Forest conversion for oil-palm, biofuels
  – The establishment of commercial plantations.

• It is important that we do not withdraw what may be a fundamental asset for rural people because we had no idea of its value.