

12 year project 3 continents 59 sites
333 villages 8301 households

The Poverty Environment Network (PEN) was launched in September 2004 by the Center for International Forestry Research. The core of PEN is the tropics-wide collection of uniform socio-economic and environmental data at household and village levels by **33 PEN partners**, generating a global database from **24 countries**. The data collection includes a careful recording of all forest and environmental uses, quantifying the overall importance of environmental income to rural livelihoods in developing countries.

Overall research question for PEN

What is the current role of forests in rural household economies, and how does that role vary with different biophysical and socioeconomic contexts?

In order to make this question more specific, PEN looked at several dimensions of the forest-poverty link:



The role in rural **livelihoods**
regular consumption,
insurance, or asset
building



The role for
different **groups**
degrees of poverty, age,
household headship,
migrants, etc.



The role in
different forest
environments
forest abundance,
condition, type,
management, etc.



The role in
different
institutional
contexts
tenure regime, local
governance, etc.



The role in
different **market**
contexts
access integration,
competitiveness in
forest products
markets, etc.

PEN researchers have challenged conventional wisdom about key areas, including the importance of environmental income, the roles of men and women in forest-product use, and the function of forests as safety nets.

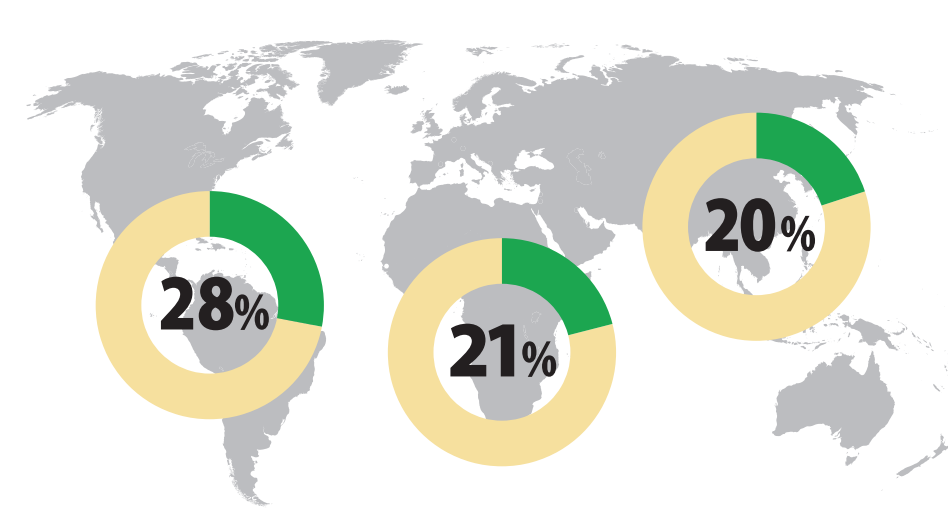
“

It's easy to create stereotypes about what the world is like. In a world of multi-faceted nuances, many established narratives prove to be wrong.

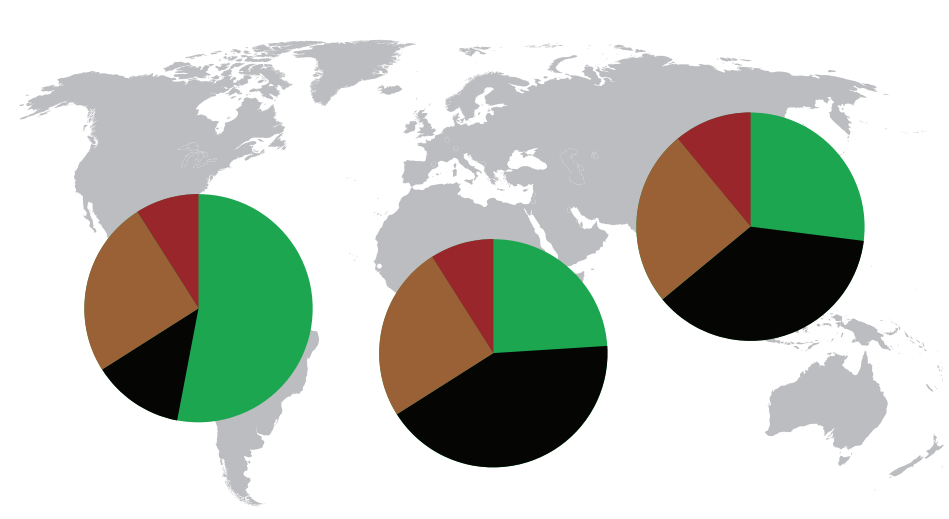
”

— Arild Angelsen, economics professor with the Norwegian University of Life Sciences and coordinator of the global study

How important is forest income?



Forest income as percentage of total income for rural households in PEN study sites in Latin America, Africa and Asia



Products providing forest income: **food** (plant and animal products), **fuel**, **structural/fiber**, and **other** (medicine, resins, dyes, fodder, manure)

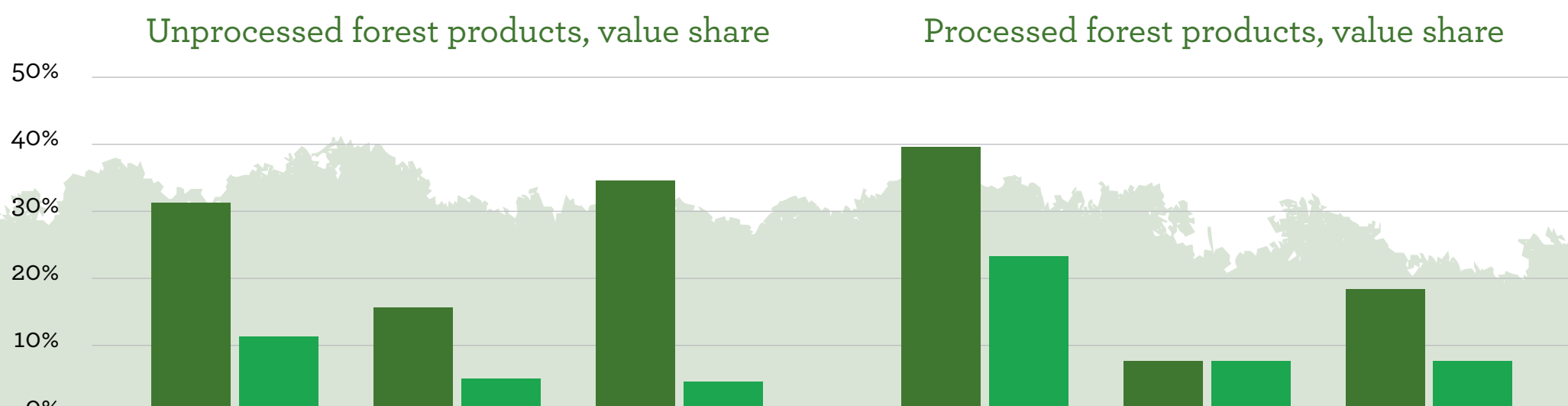
“

I was admittedly a little surprised that environmental incomes were so high. Our results indicate that, even some 10,000 years after the start of the Agricultural Revolution, rural folks in developing countries still depend strongly on foraging from nature for their livelihoods.

”

— Sven Wunder, principal economist, CIFOR

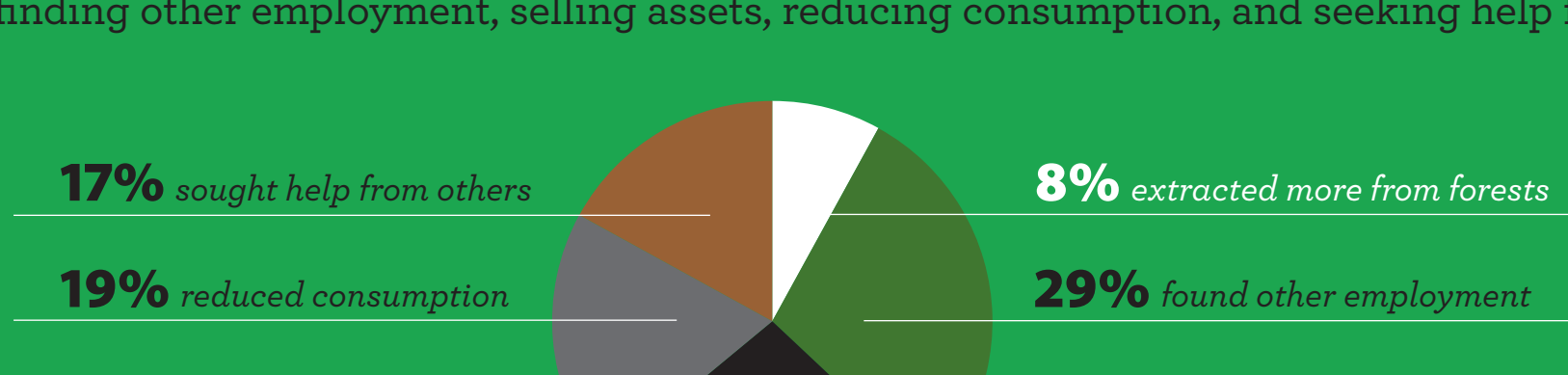
Who collects forest products, and why?



What about the perception that women collect mainly for subsistence use, men for sale? PEN found that both women and men collect predominantly for subsistence. On a global level, women collect about the same amount of unprocessed forest products as men do, while men are responsible for more processed products.

How important are forests as safety nets?

When households had to respond to **crises such as crop failures, job losses or illnesses**, only 8% extracted more from forests as a prime coping strategy. More frequently-utilized strategies involved finding other employment, selling assets, reducing consumption, and seeking help from others.



Is forest clearing poverty-driven?

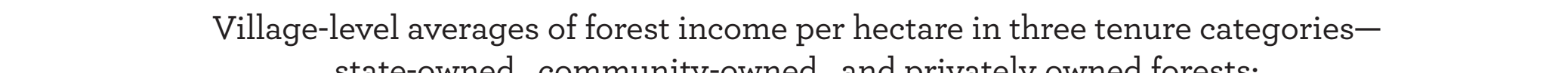
Popular policy narratives about poverty-driven forest clearing would suggest that the poorest rural households clear the most. How accurate is this perception?



PEN found that **households with medium to high asset holdings** and higher market orientation were more likely to clear forest than the poorest and market-isolated households.

Who owns the forests that support livelihoods the most?

Village-level averages of forest income per hectare in three tenure categories—state-owned, community-owned, and privately owned forests:

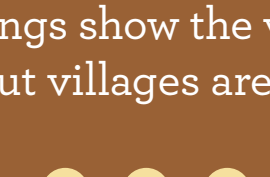


PEN found that state forests generated more income than private or community forests.

Not surprisingly, higher enforcement in state-owned forests was found to have negative associations with smallholder forest income, as was limiting user rights to formal users.

How sustainable is forest extraction?

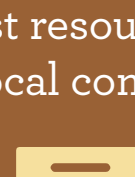
PEN findings show the vast majority of rural villages degrade their forest resource base over time, but villages are less likely to perceive resource declines when local communities:



have stable population sizes



deforest little



own a significant share of forest area

Crops, livestock, farmwork, businesses — there is a whole range of analyses possible using the PEN dataset

For example, the surveys recorded whether subjects were smiling while answering questions. Using smiles as an indicator, researchers tested the relationship between **incomes, inequality, and happiness**, finding that the poorest people become most happy with extra income, while unhappiness with large inequalities occurs at all income levels. Researchers also want to link the PEN dataset to geographic information systems (GIS) data to explore how closely environmental income depends on natural conditions and market access.

