A hungry world

Eradicating extreme poverty and hunger, which currently affects 1.1 billion people, is an ambitious goal. These people have to live on less then $1 a day and their numbers are highest in Asia, whereas they represent the largest share, almost half, of the total population in Africa. Poverty kills more than 8 million people every year. So what must be done to achieve this goal? It is well known that poor people rely disproportionately on the environment to meet their daily needs. Sound environmental management helps to secure the ability of poor people to meet these needs. Extreme poverty, degradation of natural resources and global environmental change combine in a deadly downward spiral capable of undermining all development efforts.

Pro-poor growth or Boom and Bust?

*By **Paul Steele**, consultant for Department for International Development, UK (DFID)*

Many low-income countries, particularly in Africa, need to boost economic growth by as much as 7% to achieve the MDGs. Natural resources play an important role in economic growth in low income and rural areas. They are often the main wealth available. Natural resources such as forests, fisheries, wildlife tourism and groundwater already contribute to the economic growth and exports of many developing countries.

Forests provide several developing countries with annual export revenue exceeding $100m, accounting for more than 15% of exports. In several cases forestry is vital to the economy, representing 25% of tax revenue in Cameroon, for instance. Forest-based enterprises employ some 17 million people, with a further 30 million in the informal sector. Almost one third of the world's population – 1.6 billion people – depends on forests for its livelihood. Natural resources are also particularly important for local tax revenues in poor but resource-rich areas. In some developing countries wildlife tourism is an important part of travel industry revenue.

Fisheries yield annual export revenue in excess of $100m in several poor countries, bringing in more than 20% of export earnings. More than 33 million people work in fisheries in developing countries – with the vast majority in Asia – and the industry covers more than 20% of government budgets in several west African countries (e.g. Guinea Bissau and Mauritania).

However policies to maximise the economic benefits of forestry, fishery and wildlife tourism are often not designed in a way that also benefits the poor. Growth is pro-poor as long as the poor benefit from growth. This may mean a growth strategy deliberately targeting the poor is needed, so low-income growth is greater than overall growth.

Natural resources provide a safety net that prevents poor people becoming poorer - but this is not the same as durably raising the poor above the poverty line. Indeed it has been argued that in the long run this type of dependence can leave the poor in a particularly dangerous poverty trap.

Natural resources are often remote, and property rights and regulations unclear. Furthermore little is done to uphold the institutional rights of the poor. This situation can easily lead to market failures, with the poor bearing the cost of any problems. They may even lose traditional rights to important life supporting ecosystems. Such conditions are also an incentive for "boom and bust" strategies, leading to over-exploitation. In some cases the industrial use of natural resources, far from earning revenue, may be heavily subsidised by the state. Subsidies go to state firms running at a loss (typically Ghana's timber industry) and government joint ventures (tuna processing in the Pacific). Such practices may also result in massive tax write-offs (Indonesia's timber industry) or large-scale illegal logging (Cambodia). This undermines the genuine economic benefits of such activities. Examples include Ghana's forests (in 1960-80), the fishing industry in Peru and Chile (1970s), and groundwater in western India today.

Governments must decide whether to promote small and medium scale enterprises which are more likely to benefit the poor, or larger operators which may earn higher returns – but can in some cases impact negatively on the poor. Natural resources are often the focus of conflicting aims. A political solution must be found to reconcile calls for exports, revenue, employment, livelihoods and enterprise development. It is clearly impossible to achieve a whole range of pro-poor benefits all at the same time. In many locations, for example, there are clashes between subsistence fishers and commercial trawlers. West Africa, particularly Mauritania and Guinea Bissau, has long attracted fleets from far afield, notably the former Soviet Union, the European Union and Asia[1].

Wealth from natural resources can, in the medium term, raise people above the poverty line, thanks to exports and state and private sector investment in pro-poor initiatives – informal and formal employment and activities based on natural resources of particular benefit to the poor, giving them technology, capital, and market access.

The commercial exploitation of natural resources may produce growth if industry is not subsidised. For example Cameroon's forests are harvested by large international firms, while Namibia has developed a domestic commercial fishing industry.

Large-scale commercial exploitation can do more to help the poor, if it encourages transparent spending of revenue and links with local business. It can also provide a more positive business environment by issuing resource rights, streamlining regulations, improving access to markets and technical support, all of which helps to promote small and medium scale enterprise based on the use of natural resources. Examples of this trend may be found in timber revenues in Cameroon, certain mining projects in Latin America and the privatisation of accommodation in South Africa's parks.

To avoid a boom and bust approach to the extraction of natural riches – which is bad for poverty reduction and saps the roots of the economy – it is essential to diversify away from natural resource-based growth. At both national and domestic level natural resource profits must be well invested. So there is an apparent paradox that these profits must be used to avoid dependence on them in the future. Timing is crucial to shift from extraction to resource management and diversified income sources before it is too late and the resource collapses.

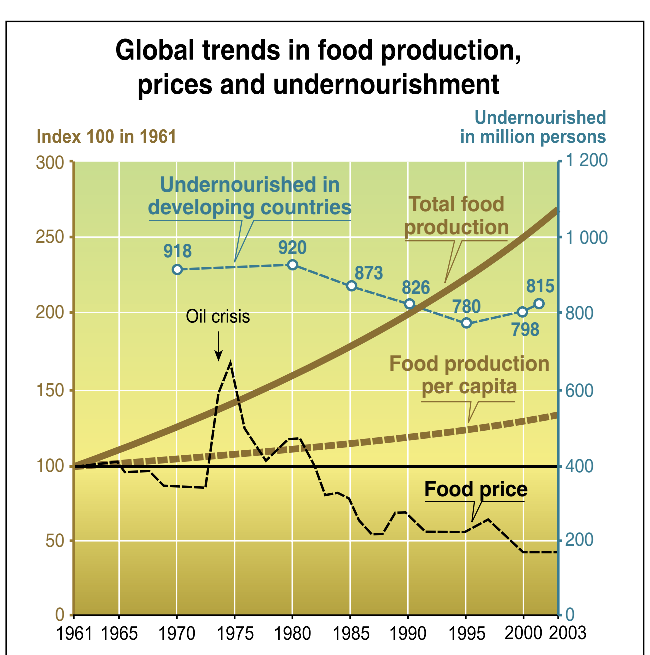
Coalitions for change are needed to drive pro-poor natural resource growth. There are many examples of such coalitions which have included civil society, private sector and international donors. Botswana is reinvesting its mineral wealth. Brazil is setting up reserves in its forests. In Kerala (India) subsistence fishers have gained more extensive rights. Bangladesh has recently seen pressure to certify shrimp farming and in western India movements have come into existence to demand the recharging of groundwater. Without such initiatives resources that could have helped achieve the MDGs would be wasted.

1. Fisheries Centre, University of British Columbia, 2005, Sea Around Us project, a five-year retrospective 1999-2004.

"The earth was not given to us by our parents, it was loaned to us by our children."
Kenyan proverb

"Livestock: a hidden insurance for sustainable livelihoods."
Principal Environment Inspector, Uganda

"Loss of genetic diversity in agriculture – silent, rapid, inexorable – is leading us to a rendezvous with extinction – to the doorstep of hunger on a scale we refuse to imagine"
Cary Fowler and Pat Mooney



Sources: Food and Agriculture Organization statistical databases (FAOSTAT), State of the Future Index (SOFI), Millennium Ecosystem Assessment

World food production have steadily increased through the last forty years, while food prices have decreased, with the exception for the mid-seventies oil crisis. Food production more than doubled (160%) from 1961 to 2003. At the same time the number of undernourished have increased since 1995, indicating huge differences in access and distribution of food.

Bringing forest livelihoods to the city

It is not surprising that poor families in rural forested areas would draw upon the nearby trees for income from the use or sale of nontimber forest products like wild fruits, construction materials, or medicinals. but the economic value of these forest products can be captured by the urban poor as well, particularly those who have recently migrated to the city.

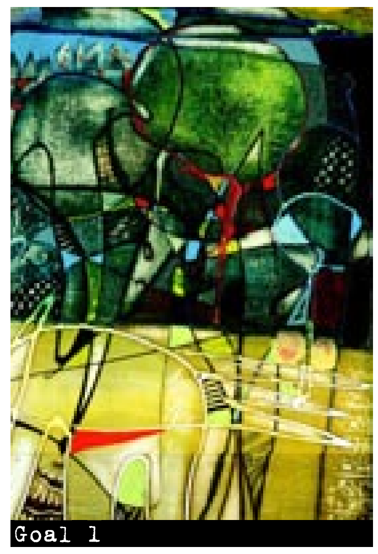
A study conducted between 1996 and 1999 in the outskirts of Riberalta, a rapidly growing city in northern Bolivia, showed that households gain a significant proportion of their income from the collection and processing of Brazil nuts and palm hearts. These peri-urban neighborhoods are peopled largely by poor families, many of them recent immigrants from rural areas. The study found that households benefited from nontimber forest products in two ways: some family members (men, mainly) go out to the forest for a few months each year to collect Brazil nuts and palm hearts to sell to processors; other family members (mostly women) work in the processing plants in and around Riberalta where Brazil nuts are graded, shelled, washed, and packaged.

Nearly 60 percent of the surveyed households participated in one form or another in the Brazil nut or palm heart industries. The poorest income group was the most dependent on nontimber forest products income, getting 47 percent of their income from it. Even the better-off families derived more than a quarter of their income from nontimber forest products.

Many recent immigrants were driven to the city in search of employment after the decline of the Bolivian rubber industry in the late 1980s. New arrivals found that their lack of education and formal training, as well as social stigmas, acted as barriers to entry into most sections of the urban labor force. For these migrants, as well as other marginalized sectors of the population, the Brazil nut industry serves as the largest employer because of its high demand for unskilled labor.

For example, migrants with only primary school education or less relied on nontimber forest products for 60 percent of their income. The dependence of the urban poor on forest-related income highlights the rural-urban continuum that exists in many nations, where environmental income continues to play an important role in the income profile of poor households even when these families leave the countryside.

Source: World Resources 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty. Washington, DC: WRI. World Resources Institute (WRI) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank. 2005.

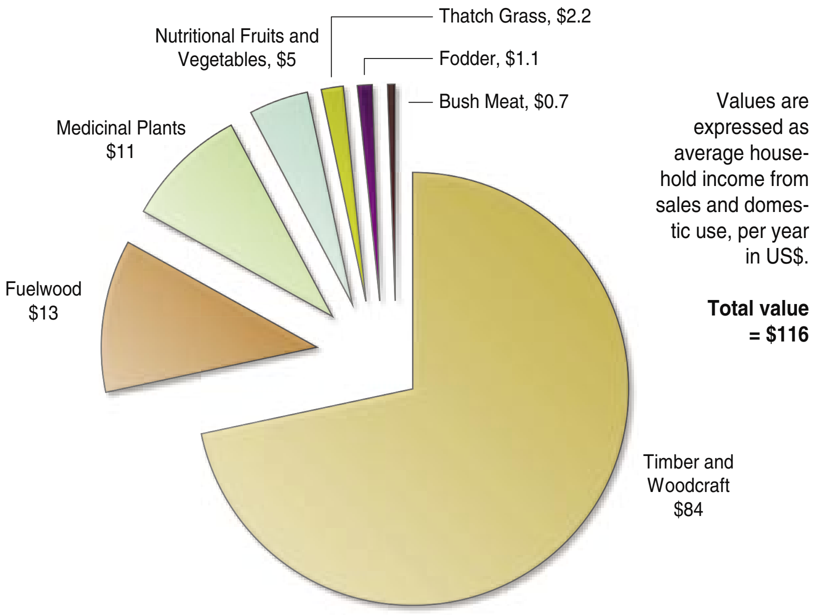


Facts and figures

- Two thirds of the world's hungry people live in Asia, but Southern Africa has the highest proportion of people experiencing hunger[1].
- In the Cote D'Ivoire, three companies – all based in G8 countries – control 95 per cent of cocoa processing and 90 per cent of its cocoa export industry[2].
- In 1960, Africa was a net exporter of food; today the continent imports one-third of its grain[3].
- 32 G8-based companies involved in the extraction of natural resources from the Democratic Republic of Congo were found to be in violation of the OECD Guidelines for Multinational Enterprises by a UN panel of experts in 2002[3].
- Unilever's 2003 profits were 33% larger than Mozambique's entire GDP, while Wal-Mart's profits that year exceeded the GDP of Ghana and Mozambique combined[3].
- One company, Monsanto, controls 52% of the maize seed in market in South Africa[3].

1. Dfid factsheet on Hunger, 2004
2. UN Millennium project Taskforce on Hunger, 2005
3. ActionAid International on corporate responsibility

Money grows on trees:
Direct values from biological products through communal resource management (Ngitili) in the Bukombe district of Shinyanga Region, Tanzania



The total value of Ngitili services (including added value and non-species based services, such as pottery and water) represents **three quarters** of the total household income ($1574) in this district.

Source: Monela, *et al.* 2004. *A Study on the Social, Economic and Environmental Impacts of Forest Landscape Restoration in Shinyanga Region, Tanzania.*

In an effort to bring back life to the degraded and over-used lands of the poor Shinyanga region of Tanzania, the government has brought back the traditional practice of Ngitili. Vegetation and trees are nurtured in enclosures and managed through the community. The practice initiative has been a success, through education, guidance and empowerment of local institutions. Not only are there benefits from the grown products, depicted in this figure, but also biodiversity has increased as well as livelihood security.

How important is environmental income?

Environmental income – the income generated from ecosystem goods and services – is a major constituent of the household incomes of the rural poor. It includes income from natural systems such as forests, grasslands, lakes, and marine waters. It also includes agricultural income – the output of agro-ecosystems. Researchers often make a distinction between agricultural income and what in this report we term "wild income" – that is, income from less manipulated natural systems like forests and fisheries. There is overlap between the two, as in the use of forest grasses for livestock forage, or forest leaf litter as a soil amendment or crop mulch.

Environmental income can be derived in several distinct ways. Income might accrue to households through direct use of ecosystem services, for instance, by consuming bushmeat and other wild foods, cutting fodder for livestock, using wood products in home construction, or eating produce grown in a home garden. Where markets exist, goods harvested from ecosystems, such as fish, herbs, or fuelwood, can be sold for cash or exchanged for services like school tuition. In addition, communities may charge stumpage fees for providing loggers access to timber, or they may collect taxes or levees from hunters or tourists, or royalties for access to minerals or the use of local species for pharmaceutical research. The income benefits of these public revenues may then be passed on to households in the form of public infrastructure like roads, schools, and clinics, or public services like agricultural extension programs. Ecosystems have several characteristics that make them attractive as a source of income. Environmental resources are renewable, widespread, and they are often found in common property areas where the poor can access them without owning the land. In addition, exploiting natural systems often can be done with little need for investment or expensive equipment, making the cost of entry low—an important consideration for poor families with limited assets.

The importance of environmental income to the poor can be judged at different scales. At the global scale, estimates of nature's contribution to livelihoods are impressive. For example, the World Bank estimates that 90 percent of the world's 1.1 billion poor – those living on $1 per day or less – depend on forests for at least some of their income. Agriculture is likewise essential to poor families. Small-scale agriculture – the kind the poor practice – accounts for more than 90 percent of Africa's agricultural production. In addition, over 600 million of the world's poo r keep livestock, a critical cash asset for many. The Food and Agriculture Organization estimates that over 90 percent of the 15 million people working the world's coastal waters are small-scale fishers, most of them poor. That does not count the tens of millions of the poor who fish inland rivers, lakes, ponds, and even rice paddies.

At the national level, environmental income is also important, not only to the poor, but to national economies. Small-scale fisheries, for example, are not only common sources of income for the impoverished but are major contributors to the economies of many nations. In Asia small-scale fisheries contributed 25 percent of the total fisheries production of Malaysia, the Philippines, Thailand, and Taiwan for the decade ending in 1997. In West Africa the importance of small-scale fishing is greater still, constituting three-fourths of the region's total fish catch. In Indonesia, small-scale fishers are responsible for almost 95 percent of the total marine catch. At the same time, export revenues from small-scale agriculture are vital to many poor nations. In Mali, cotton grown by smallholder farmers generates 8 percent of the nation's GDP and 15 percent of all government revenues. Some 30 percent of all Malian households grow cotton on small plots, and it is second only to gold as the nation's most important export.

Source: World Resources 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty. Washington, DC: WRI. World Resources Institute (WRI) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank. 2005.

Plenty of food – yet the poor are starving

*By **Jeevan Vasagar** in Tahoua, Niger*

In Tahoua market, there is no sign that times are hard. Instead, there are piles of red onions, bundles of glistening spinach, and pumpkins sliced into orange shards. There are plastic bags of rice, pasta and manioc flour, and the sound of butchers' knives whistling as they are sharpened before hacking apart joints of goat and beef.

A few minutes' drive from the market, along muddy streets filled with puddles of rainwater, there is the more familiar face of Niger. Under canvas tents, aid workers coax babies with spidery limbs to take sips of milk, or the smallest dabs of high-protein paste.

Wasted infants are wrapped in gold foil to keep them warm. There is the sound of children wailing, or coughing in machine-gun bursts.

"I cannot afford to buy millet in the market, so I have no food, and there is no milk to give my baby," says Fatou, a mother cradling her son Alhassan. Though he is 12 months old he weighs just 3.3kg (around 7lbs).

Fatou, a slender, childlike young woman in a blue shawl, ate weeds to survive before her baby was admitted to a treatment centre run by the medical charity MSF.

This is the strange reality of Niger's hunger crisis. There is plenty of food, but children are dying because their parents cannot afford to buy it.

The starvation in Niger is not the inevitable consequence of poverty, or simply the fault of locusts or drought. It is also the result of a belief that the free market can solve the problems of one of the world's poorest countries.

The price of grain has skyrocketed; a 100kg bag of millet, the staple grain, costs around 8,000 to 12,000 West African francs (around £13) last year but now costs more than 22,000 francs (£25). According to Washington-based analysts the Famine Early Warning System Network (Fewsnet), drought and pests have only had a "modest impact" on grain production in Niger.

The last harvest was only 11% below the five-yearly average. Prices have been rising also because traders in Niger have been exporting grain to wealthier neighbouring countries, including Nigeria and Ghana.

Niger, the second-poorest country in the world, relies heavily on donors such as the EU and France, which favour free-market solutions to African poverty. So the Niger government declined to hand out free food to the starving. Instead, it offered millet at subsidised prices. But the poorest could still not afford to buy.

At Tahoua market the traders are reluctant to talk about the hunger crisis affecting their countrymen as they spread their wares under thatched verandas jutting out from mud buildings. Snatches of the Qur'an from tinny tape players compete with Bollywood songs and the growl of lorries bringing sacks of rice and flour.

One man opens his left palm to display half a dozen tiny scorpions, a living advert for the herbal scorpion antidote he is selling in his other hand.

Omar Mahmoud, 18, who helps sell rice at his father's shop, blames the famine on drought: "I know there is hunger. It is because there wasn't enough rain. The price of millet has gone up because there wasn't enough rain last year."

Last month around 2,000 protesters marched through the streets of the capital, Niamey, demanding free food. The government refused. The same month, G8 finance ministers agreed to write off the country's $2bn (£1.3bn) debt.

"The appropriate response would have been to do free food distributions in the worst-affected areas," said Johanne Sekkenes, head of MSF's mission in Niger. "We are not speaking about free distribution to everybody, but to the most affected areas and the most vulnerable people."

The UN, whose World Food Programme distributes emergency supplies in other hunger-stricken parts of Africa, also declined to distribute free food. The reason given was that interfering with the free market could disrupt Niger's development out of poverty.

"I think an emergency response should have started much earlier," says Ms Sekkenes. "Now we find ourselves in this serious nutritional crisis, with children under five who are suffering."

Three weeks ago the Niger government, its foreign donor countries and the UN did a volte-face, jointly agreeing to allow the distribution of free food. Aid is now being flown in from Europe and trucked from neighbouring countries.

A total of 3.6 million people live in the regions of Niger affected by the food crisis. According to the most reliable estimate, some 874,000 people now need free food to survive.

The food aid will arrive as children weakened by hunger face a new battle against disease. It is the rainy season in Niger, and the water helps spread diseases such as malaria and diarrhoea.

In the MSF treatment centre, a three-year-old girl called Aminata is suffering from a grotesque eye condition. Her eyeball is so swollen with fluid that it has popped out of her skull and bulges from her face. The doctors call it a retinal blastoma, the result of an untreated eye infection.

"The thing in her eye started off very small," said Aminata's mother, Nisbou. "I did not have money for hospital, so I treated it with herbs, traditional medicine."

The hunger crisis has struck communities which depend on a mix of subsistence farming and herding for their livelihoods. The stories told by the women in the treatment centre show that their plight began when locusts ate their crop and cattle fodder, but spiralled when the prices of food in the market shot out of reach.

In desperate times, adults can get by on the poorest of foods, weeds and the stubble of their crops, but mothers cannot make breastmilk on this diet and infants cannot eat weeds.

Amid the anxiety, there are unexpected moments of gaiety in the feeding centre. Asked her age, Nisbou, who is probably about 20, replied: "I am 100 years old." She burst out laughing at her own joke, then looked weary again, and tucked her baby's deformed face under a lace shawl.

Donor commitments

We fundamentally depend on natural ecosystems and services provided by watersheds and aquifers, coastal and marine ecosystems, forests, soils and the atmosphere. These resources and services continue to be threatened as our current patterns of consumption and production undermine the sustainability of the resource base upon which we depend.

Extreme poverty, degradation of natural resources and global environmental change combine in a vicious downward spiral that can undermine all development efforts and heighten potential threats of conflict and insecurity at all levels, including increased vulnerability in small island developing states. Investment in environmental and natural resource sustainability has been proven to yield very high returns in the long term political decision-making circles, however, has continued to give disproportionate priority to investments with short-term returns, without recognizing that such investments may not contribute to breaking out of the cycle of extreme poverty and environmental degradation in the long term.

The failure to operationalize the link between environmental sustainability and the Millennium Development Goals, in particular Goal l, is evident in current poverty reduction strategies, national development plans and sub-national and sectoral development plans and policies in developing countries. Political pressures lead to the prioritization of investment with short-term and sectoral orientations in situations of extreme poverty. The severely constrained fiscal space in which many developing counties operate can also prevent the integration of environmental sustainability considerations into such plans and strategies.

In addition, investment-related information, particularly on financial and economic costs and benefits, remains extremely limited, thus further constraining environment-related investment.

The aspirations of the international community embodied in the Millennium Declaration and other summits over recent years, and endorsed by heads of State and Government, can only be met through a vastly increased effort. The international community should develop a costed, targeted and financed investment plan, and must revitalize commitment to improved governance and the rule of law.

Source: President's summary of the discussion by ministers and heads of delegations at the 23rd GC/GMEF of UNEP: contribution to the summit meeting of the General Assembly on the implementation of the Millennium Declaration

portion of people who suffer from hunger.