Markets and Incentives in Livelihoods and Landscapes Strategy

Using economic and financial tools to sustain forest livelihoods and landscapes

L. Emerton, K. Faccer and D. Huberman

MARKETS AND INCENTIVES FOR LIVELIHOODS AND LANDSCAPES SERIES NO. 1

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Publications Services
Rue Mauverney 28
1196 Gland
Switzerland
Tel +41 22 999 0000
Fax +41 22 999 0020
books@iucn.org
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Contents

The context: forest livelihoods and landscapes from an economic perspective

The Livelihoods and Landscapes Strategy seeks to influence the ways in which forests are managed and used. It intends to leverage real and meaningful improvements in the livelihoods of the rural poor, enhance biodiversity conservation, and ensure the sustainable supply of forest goods and services. These goals are founded on a strong recognition of the close relationship between people's economic wellbeing, and the status and integrity of forests – and of the urgency of acting on these economic links so as to maximise gains to both livelihoods and landscapes.

As we describe in the paragraphs below, economic factors have an extremely important influence on forest livelihoods and landscapes. The Markets & Incentives theme of LLS aims to identify how economic and financial tools can be used to support more sustainable forest use and management, while also increasing the incomes and livelihood security of the rural poor.

How economic forces can undermine forest livelihoods and landscapes

Before we look at the ways in markets can be used as a positive force for conservation and sustainable development, it is first of all necessary to understand how economic factors can also act to undermine forest landscapes and livelihoods. Addressing such negative linkages, and correcting for the price and market distortions that cause them, are key topics in the Markets & Incentives theme of LLS.

People's economic conditions and circumstances have a strong influence on forest landscapes: for example how and what they produce and consume, what sources of income and employment are available to them, the dynamics of prices and markets, and the ways in which policies are used to reach particular economic and development goals.

Human economic needs and wants lead directly to activities which over-exploit, clear and degrade forests. Both poverty and wealth may act as drivers of forest loss. In some cases the basic requirements for human survival (such as food, energy and shelter) are being sourced unsustainably from forests. The greatest current threats to forests however arise from the rapidly increasing demands for commodities and industrial products associated with the growing consumption and changing aspirations of urban populations and global markets. Timber, energy, foods and lands for housing comprise just a few of these demands.

The economic policies and instruments that are used by governments to stimulate growth and development can also act to encourage forest loss. They set the underlying economic conditions which cause people to produce, consume, trade and invest in an environmentally unsustainable manner, as they seek to meet their needs and wants.

All to often economic policies prioritise or promote activities, products and markets that impact negatively on forest landscapes. At the worst, they may distort prices and markets so as to present "perverse incentives" which actually encourage people to degrade, deplete and convert forests in the course of their economic activities, because it is more profitable for them to do so. At a global level, perverse subsidies against the environment are estimated to amount to roughly US$1 trillion per year worldwide *(1)*. Many directly undermine forest landscapes and livelihoods.

In the Brazilian Amazon for example, official development strategy and economic policies directed almost exclusively at the expansion of corporate forestry, ranching, agriculture and mining interests, are thought to have accounted for at least 35% of all forest altered up to the beginning of the 1980s *(2)*. Interestingly enough, without such distortions and subsidies, it is actually doubtful whether many of these activities would in fact have been viable at the start. Likewise, work carried out in Selangor Malaysia *(3)* and Sumatra Indonesia *(4)* has shown that despite the fact that the broader economic and social returns to sustainable forest management far exceed unsustainable timber exploitation, high timber prices still make unsustainable logging a more financially desirable option.

In the absence of a clear economic gain from using forests sustainably (and especially where there are higher profits to be made from degrading them), few companies, communities, households or individuals are likely to be willing to do so – and in many cases will simply be economically unable to.

How forest landscape degradation can undermine livelihoods and economies

It remains something of a paradox that, while much of the impetus to convert, clear and exploit forest land and resources comes from the search for greater income, employment and production, forest landscape degradation almost inevitably leads to substantial economic losses in these areas.

Such losses occur as the ability of forests to generate economically important goods and service is progressively eroded. These goods and services are costly to replace or source elsewhere, and many people simply do not have the means or market access to obtain them. Forest ecosystems have an immense value, ranging from the role of forest products in local livelihoods, through the importance of forest goods and services to national economies, to the global economic significance of forest services which enable human settlement and production, protect against disasters, and provide basic life support.

The total economic value of Mexico's forests for non-extractive uses has for instance been calculated to be some US$4 billion a year *(5)*, forest catchment protection in Ecuador's Andean Highlands is thought to be worth up to US$ 15 million for just one of the many hydroelectric schemes in the region *(6)*, and the global net benefit of permanently protecting the Amazon forest in order to sequester carbon has been estimated at around US$70 billion or 0.2 percent of the world's GDP *(7)*. The forest sector is thought to provide for more than 10% of the GDP in many of the poorest countries, and in all developing countries taken together generates employment for around 50 million people *(8)*. In Cameroon, the Central African Republic and Liberia, forests contribute between 30% and 40% of national exports *(9)*.

Of particular economic importance is the fact that, in many countries, forest goods and services underpin the livelihoods of much of the rural population. Harvesting of medicinal plants involves around 10% of rural households in Nepal *(10)*, and in the Democratic Republic of Congo forest foods comprise around one third of household production *(11)*. In Lao PDR, wild foods are consistently ranked as the most important forest resource by rural villagers, and have been calculated to contribute between 61–79% of non-rice food consumption by weight, and provide an average of 4% of energy intake, 40% of calcium, 25% of iron and 40% of vitamins A and C *(12)*. In Malawi some 90% of national energy requirements are met from trees, in Mozambique 80%, in Tanzania 97%, and in Zambia 70% *(13)*.

Forest goods ands services play a particularly important economic role for poorer and more vulnerable groups. In northern Zambia miombo woodland products contribute half of annual subsistence and income for the poorest households (more than twice as much as for other households) *(14)*, and in rural Zimbabwe forest resources have been found to play by far the greatest role in household income for the poorest quintile of the population (around 40%) *(15)*. A study of villages in the Himalaya region of India found that the poor relied on forest resources for around 25% of their income, as compared to under 5% for the rich *(16)*. In the north-east of Lao PDR the relative contribution of forest products (more than half of per capita GDP) has been shown to be directly correlated with poverty status, measured in terms of livestock ownership, food security, cash availability and access to land *(17)*.

Logging truck in Harapan, Indonesia.

Woman carrying fuelwood in Shivapuri National Park, Nepal.

In an urban area of northern Bolivia, it was found that more than half of city-dwellers participated in one form or another in the Brazil nut or Palm heart industries; the poorest income group was most dependent on this source of livelihood, obtaining almost half of their income from it *(18)*.

Factoring forest landscape and livelihood values into economic decision-making

A fundamental problem is that conventional economic analysis gives little weight to forest ecosystem values which lie outside formal markets and pricing mechanisms. In particular economic statistics and calculations – as well as the policies, markets and prices that are informed by them – tend to under-emphasise, or ignore altogether, the economic value of forest landscapes in terms of the broader environmental services and livelihood benefits they provide.

Yet in many cases it is these very benefits which form the largest component of forest values. For example in Indonesia, official data show that forests contribute 1% to 2% of GDP, whereas it is thought that the potential value of forests to that economy is actually closer to 15% to 20% *(19)*. In Lao PDR, the value-added to livelihoods from non-timber forest product collection in 2000 was calculated to be more than $185 million – as compared to gross revenues from commercial round log harvesting of around $50 million *(20)*. Similarly, subsistence-level forest use in 2001 was worth more than twenty times as much as formal sector commercial forestry earnings in Kenya *(21)*.

Such under-valuation not only massively underestimates the real value of forests, but also marginalises the groups who depend most on these forest goods and services. Again and again, policy and pricing decisions are made which favour the commercial (and often unsustainable) extractive use of forests, or their clearance for alternative land uses. As a consequence, many of the opportunities and needs to use forest landscapes to add value to economies and livelihoods, and as an engine for sustainable development and poverty alleviation, are missed. Forest values continue to be imperfectly captured and inequitably distributed.

There is ample evidence to show that the returns from sustainable forest utilisation and management can be far higher – and far more equitably distributed – than the profits accruing from forest clearance or degradation. In Tapean Forest in Ratanakiri Province of Cambodia, NTFP collection and environmental benefits have been calculated to be worth more than US$400/ha, almost five times as much as unsustainable timber production *(22)*. Likewise, a comparison of forest utilization values in the Peruvian Amazon finds a “net present conservation value” of nearly US$7 000/ha, far higher than the returns either to clear-cut timber harvesting, or to subsequent plantations or cattle ranching *(23)*. Similar conclusions were reached for the Upper Napo region of Ecuador’s Amazon region, where sustainable extraction of NTFPs was found to have a net present value of between US$1,250 and US$2,850 – several times greater than the net present value for agriculture (under US$500), timber clear-cutting (under US$200), or cattle ranching (between US$57–287) *(24)*.

Opportunities to maximise non-extractive forest values also tend to be under-emphasised, because there is little appreciation of the high and wide-ranging economic benefits they yield. In Portland Oregon, Portland Maine and Seattle Washington it has for example been found that every $1 invested in watershed protection can save anywhere from $7.50 to nearly $200 in costs for new water treatment and filtration facilities *(25)*. Through conserving upstream forests in the Catskills range, New York City hopes to have avoided investing an extra $ 4-6 billion on infrastructure to maintain the quality of urban water supplies *(26)*.

Using markets and incentives to sustain forest livelihoods and landscapes

The paragraphs above set the scene for dealing with markets and incentives in LLS. While the sustainable use and

management of forest ecosystems yields extremely high economic and development gains, in most countries there remain policy, market and price barriers to fully realising these benefits, and to maximising forest landscape and livelihood gains. The Markets & Incentives theme is concerned with using economic and financial tools to overcome these barriers and threats, and to sustain and improve forest livelihoods and landscapes.

As we will describe in the next section, the basic aim of the Markets & Incentives theme is to find the right combination of tools and approaches which will, in a given LLS landscape or country, provide both the necessary and the sufficient economic and financial conditions for people to conserve forest landscapes, enhance their livelihoods, and improve their economic status. It works on using economics as a positive force for forest landscapes and livelihoods.

If forest landscapes are to be used and managed so that they continue to generate important ecosystem services, then the conditions have to be set in place to ensure that the people whose land and resource use activities impact on them find it more profitable to conserve forests, rather than degrade them, in the course of their economic activities. In other words, there have to be sufficient market incentives for forest landscape conservation.

This requires improving the economic policies, prices and markets that shape people's production and consumption behaviour, and making sure that they work to the benefit of both forest conservation and human livelihoods. It means influencing the economic and financial trade-offs that governments, businesses, households and individuals face when they decide to use forest land and resources in a particular way – so that they take account of the full range of forest landscape values, and the full range of stakeholders who depend on them.

Tools for ensuring that forests act as an engine for sustainable development at the national level are an important focus of this work, as are the linkages between forest landscapes, businesses and commercial markets. LLS as a whole, including the Markets & Incentives theme, however has a particular concern with securing and enhancing the livelihoods of the poorest.

A key challenge is therefore to identify the economic tools, markets and incentives by which the sustainable management of forest landscapes can provide a means of generating wealth and income which can directly benefit the poor through strengthening and expanding their livelihood base. The aim is both to alleviate poverty through ensuring that the poor have immediate access to the economic goods and services they require for survival, as well as to find ways of reducing poverty by providing opportunities for long-term economic growth and permanent improvements in socio-economic status.

Producing palm oil in the Bijagos archipelago, Guinea-Bissau.

The LLS Markets & Incentives theme

The intervention goal of the Markets & Incentives theme is that "information is generated and disseminated, and capacity is strengthened, to promote the development of markets for forest products and ecosystem services that contribute to both rural livelihoods and biodiversity conservation". It aims to identify economic and financial tools which can assist in developing strategies to overcome the disincentives and obstacles to forest landscape conservation, in ways that strengthen the livelihoods of the poor.

Working with geographic components in LLS landscapes across Africa, Asia and Latin America, the Markets & Incentives theme is identifying and initiating on-the-ground market-based instruments for landscape conservation and livelihood improvement, as well as developing and sharing knowledge, best practice and lessons learned. In line with the thinking laid out above, the Markets & Incentives theme is organised around five sets of economic and financial tools for conserving forest landscapes and enhancing forest livelihoods, and overcoming the barriers and threats to them (the rest of this knowledge paper describes these tools, and how they are being applied in the Markets & Incentives theme of LLS):

Economic assessment and valuation: Developing and applying the analytical tools which will enable forest ecosystem services to be better incorporated into private and public decision-making, and used to identify means of capturing these economic benefits in support of sustainable livelihoods and landscape conservation.

Small enterprise development: Working to identify and develop sustainable resource-based small enterprises which can add value to local production and livelihoods, and provide material incentives for forest landscape conservation.

Markets for ecosystem services: Identifying payment schemes which will ensure that the land and resource managers (particularly local communities) who generate valuable ecosystem services are rewarded for their actions by the beneficiaries of these services.

Trade and supply chains: Improving the sustainability and enhancing the equitable distribution of the flows of forest products that are traded, locally, nationally and internationally.

Influencing macroeconomic policy and planning: Strengthening the economic case for forest landscape conservation and livelihood improvement and mainstreaming them into development policy and practice, so as to build awareness and influence action among macroeconomic and financial planners in LLS countries, businesses and the private sector, and development agencies.

Woman selling NTFP in a market in Stung Treng, Cambodia.

Economic assessment and valuation

This component of the Markets & Incentives theme addresses the problems associated with the under-valuation of forest goods and services (and thus the marginalisation of the groups who depend on them) in conservation and development decision-making.

Much of the theme's work on valuation revolves around better understanding the economic trade-offs that arise in the face of competing demands for forest land and resources. On the one hand there is a need to ensure that the economic needs and aspirations of all stakeholders are accorded an equal priority in decision-making, as well as the means and entitlements available to fulfil them. At the same time, more accurate valuation permits greater inclusivity as regards balancing the gains from forest conservation and sustainable use, and the costs and losses from forest degradation, against the returns from clear-felling, resource over-extraction and conversion of forest land to other uses.

One way in which valuation is being used in the Markets & Incentives theme is in relation to the baselines and monitoring used to measure the

progress of LLS projects. Valuation is key to tracking the economic changes which result from LLS activities, and identifying how these impact on different groups and sectors. Valuation techniques are also being applied to generate data and evidence to make a more convincing case for improved policies, increased budgets and a higher prioritisation of forest landscape and livelihood conservation in economic planning. Efforts are also being made to expand the scope of the statistics and indicators that are used to measure economic and development performance, to ensure they account for the full range of forest landscape and livelihood values, and factor in realistic estimates of the costs arising from forest degradation and loss.

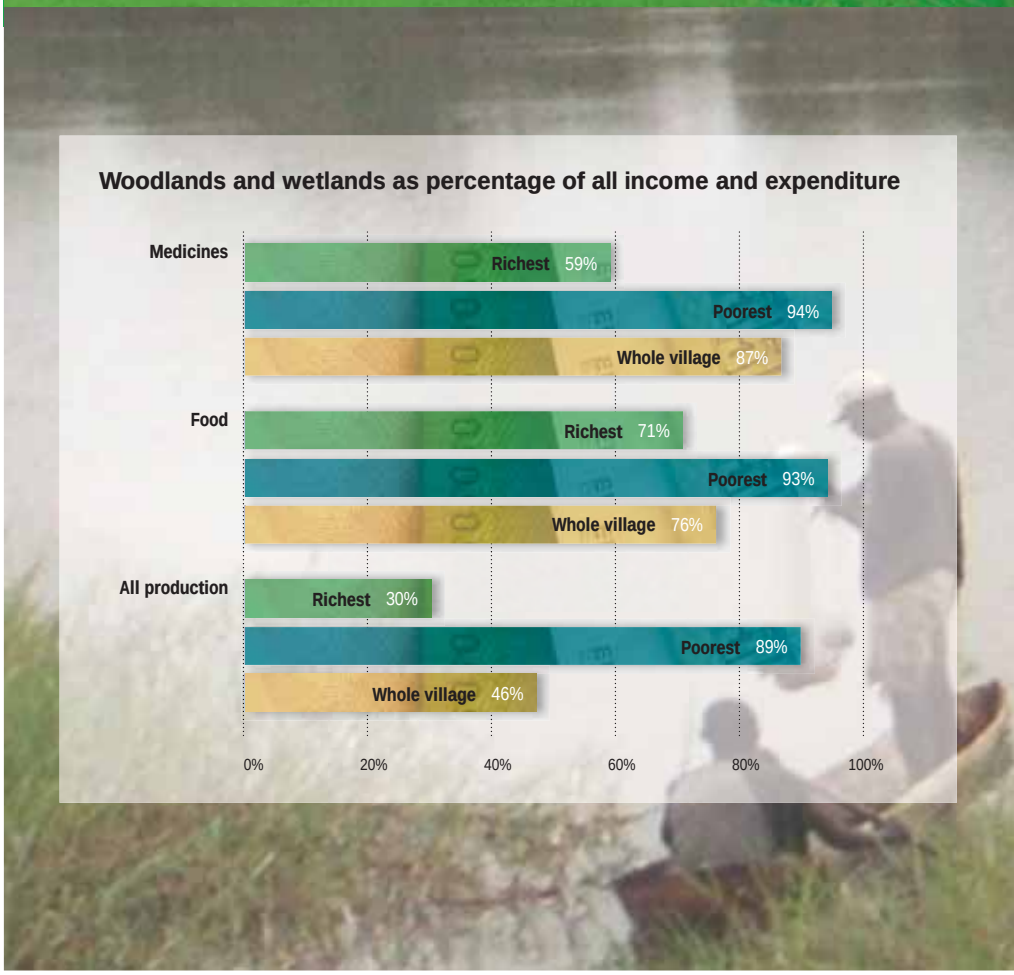
A particular priority is to ensure that the non-market values (including both ecosystem services and livelihood values) that are usually omitted from economic statistics and calculations are factored into decision-making. As the box below shows, valuation has been used in one LLS landscape, Mtanza-Msona village in Tanzania, to demonstrate the importance of treating forest resources as a stock of natural capital that is essential for local livelihoods and poverty alleviation.

Last but not least, many of the market-based incentives that can be used to encourage forest landscape conservation and enhance forest livelihoods (and are described in later sections) require valuation as a first step. Assessing the relative costs and benefits of different land, resource and investment options to different groups shows where, under current conditions, there are needs to reward, compensate or encourage conservation by adding value, raising finance or redistributing benefits. It also points to cases where there may be the potential to raise additional finance or funds from valuable forest ecosystem services.

The value of woodlands and wetlands for local livelihoods in Mtanza-Msona village, Tanzania

Woodland and wetland resources underpin local livelihoods in Mtanza-Msona Village, a remote area where more than a third of the population live below the poverty line. They provide for household energy, health, shelter, nutrition, tools and cash income generation. The local value of woodland and wetland resources is equivalent to just over $107 per capita or 37% of GDP.

A comparison of the value of woodland and wetland resources with other sources of production, consumption and basic needs underlines their role and importance in the household and village economy – especially for the poor. Looking at three basic indicators: the total value of household production for home consumption and sale, food/nutrition, and healthcare/medicines shows that natural products make a staggering contribution to household welfare, and save considerable expenditures on purchased alternatives. They are worth almost eight times as much as all other sources of farm and off-farm production for the poorest households in the village. The value of plant-based medicines is almost 15 times as high as purchased drugs and 'modern' treatment, and the wide range of wild foods harvested is worth more than 14 times as much as poor households' annual expenditures on food from the market.



Small enterprise development

This component of the Markets & Incentives theme aims to enhance livelihoods and sustainable use through the initiation, development and growth of small biodiversity-based enterprises in LLS sites. It uses small enterprises as levers to advance relationships between livelihoods and landscapes while unlocking economic returns using the power of markets. In particular, activities in small enterprise development will improve the access of LLS stakeholders to beneficial and sustainable markets with the potential to increase biodiversity value at a local level while generating tangible economic, management and livelihood benefits to the rural poor.

The focus of this sub-theme is on the development of enterprises for relatively established biodiversity and related commodity markets (as opposed to ecosystem services), such as those for agricultural, timber, non-timber and ecotourism products. The economic contribution of small enterprises to these industries is significant, particularly in developing countries, where small and medium enterprises can make up between 80 and 90% of all enterprises in operation *(27)*.

However, for many, deficiencies in market knowledge, technical capacity and infrastructure limits their potential success. To this end, micro, small and medium enterprises across all sectors regularly require enterprise development assistance to respond to wide ranging business needs from financing and business planning to strategic decision-making *(28)*.

For small biodiversity businesses run by the rural poor whose informal use and trade is largely invisible to market forces and decision-makers, this support can be even more important. It provides rural people with the capacity, knowledge and independence to move into the stream of benefits available through formal markets and away from poverty and unsustainable use. It does so by understanding the specific needs and opportunities of target beneficiaries and markets and identifying the means to address these, often through strategic actions in accessing and engaging markets and through capital inputs, value addition and other improvements within the supply chain.

Enterprise development generally refers to any technical support provided towards improving new or existing biodiversity businesses. It takes many forms, from research and local interviews at the outset as new business venture opportunities are assessed, to training producers and matchmaking for new and higher value markets. Across LLS, enterprise development activities are being carried out towards the establishment and advancement of enterprises for a range of local, regional and international markets.

In other areas, enterprise development is being used to advance and expand existing businesses and resource use patterns in LLS countries in equatorial Africa. As the box below describes for the case of natural oils in Zambia, these types of small enterprises can provide extremely lucrative business opportunities at the local level, benefiting all sectors of society.

Business based on natural oils in Zambia

In 2006, IUCN's Natural Futures Programme provided support to Kalahari Natural Oils (KNO), a small natural products enterprise in Zambia supporting approximately 1500 harvesters of the wild mongongo nut along the Zambesi River. Recently established, KNO sought business planning support and improvements to the supply chain aimed at improved access to national cosmetic and personal care markets. Over several months, enterprise development support helped to expand and organise the supply chain into producer associations trained in sustainable harvesting and quality production. Enterprise development inputs also helped to improve processing technology and productive capacity for a more regular and consistent supply. In the end, the increased market demand sought by KNO was realised, placing mongongo products in retail outlets across Zambia and increasing incomes for women active in the supply chain.

Markets for ecosystem services

This component of the Markets & Incentives theme is dedicated to some of the most overlooked and undervalued aspects of forest landscapes – the ecosystem services they provide to societies. Examples of such services include plant pollination, erosion control, carbon sequestration, regulation of water flows, and conservation of habitat for wild species.

Creating markets for these different ecosystem services often entails creating value where there previously was none. Over recent years, the growing concern with climate change has stimulate a great deal of interest in the carbon sink role of forests. This trend has given rise to a global market in 'carbon credits', through which payments can actually be made for the enhancement and/or conservation of carbon stocks in forest ecosystems. The market value of all forest carbon projects worldwide was estimated to be over €20 million in 2006 *(29)*.

Forest landscapes also provide many other ecosystem services which have the potential for market development. Around the world, there is a growing portfolio of examples whereby water-related ecosystem services (e.g. filtration, regulation, and provision) have been incentivized through direct payments to the stewards of the forests. For example, payments for ecosystem services are being used in an LLS site in the Chinese Province of Miyun as a means to conserve the forested area in the catchment area for the city of Beijing's drinking water supply *(30)*. There are also many other ecosystem services which have yet to be explicitly integrated into effective payments schemes (e.g. soil formation, storm buffering, etc.).

Payments for ecosystem services are becoming increasingly used as a means of supporting sustainable development efforts in rural landscapes, meeting the important challenge of ensuring that those who sustain and conserve forest landscapes (and thereby provide economically valuable services to others) are fairly rewarded for their efforts. Still, there are many challenges that need to be overcome in order to bring these opportunities to rural communities. Not only are these markets relatively young, but they are often difficult to access. In many LLS sites, the institutional and political capacities are currently insufficient to facilitate the implementation of fair and effective ecosystem service 'deals'.

While there currently is a strong demand for ecosystem-based carbon sequestration projects (many individuals and organizations in developed countries are keen to 'offset' their carbon footprint by investing in forest conservation/restoration projects), the supply-side is often not able to keep up. Currently, there are only few examples of landscape-level ecosystem management efforts that have benefitted from carbon finance (see box below for an example of such a project recently launched in Cambodia *(31)*). A guiding objective of this sub-theme will thus consist in supporting the 'supply side' of these new markets by developing attractive 'ecosystem services portfolios' in several LLS sites.

Generally speaking, the Market and Incentives component of LLS will aim to support the capacity that rural communities have to deliver, and market, forest-based ecosystem services. While the existing market for carbon credits could serve as an entry point for supporting forest landscape restoration activities, the objective of 'marketing' this specific ecosystem service is to support a broader strategy for the management of a 'bundle' of ecosystem services within the landscape. Special emphasis will be placed on developing opportunities to use markets for ecosystem services as a means of supporting an integrated approach to water and carbon management within LLS sites.

Selling Carbon through Community Forestry in Cambodia

IIn the Northwestern province of Oddar Meanchay, Cambodia, 12 community forestry projects have united to jointly market the 8.7 million tons of CO2 it is expected to sequester over the next 30 years. This project is the first of its kind to be developed in accordance with both the Voluntary Carbon Standard (VCS) and the Climate Community and Biodiversity Standard (CCBS). Other benefits of the scheme, in addition to climate change mitigation, include the enhancement of the local hydrology and the conservation of critical habitats for endangered species. The income generated by the sale of carbon credits will be used to help rural communities develop a range of activities, such as sustainable enterprises based on non-timber forest products, ecotourism, and water resource development.

Trade and supply chains

This component of the Markets & Incentives theme picks up where small enterprise development leaves off from a focus on specific business entities and factors towards their success to the enabling environment of biodiversity market systems. Interventions in this area work to better understand and address barriers in the flow and exchange of biodiversity goods to affect changes outside of the control of single enterprises. The main targets of this work includes government and other authorities involved in setting the rules and regulations governing trade as well as others engaged in issues of compliance and supply chain dynamics.

Internationally and domestically, trade is governed and influenced by a complex set of international, multinational and related laws, agreements and associated bodies. At each level of authority there is potential for trade incentives and disincentives to be imposed and affect sustainability along the supply chain. The range of incentives and disincentives is broad, from legal limits on resource use and ownership and the intricate codes of import and export, to protection for intellectual property or endangered species. In addition to these however, there are also a variety of governance issues, illegalities and voluntary measures that can also have a significant impact on sustainability and equity in trade.

LLS interventions in trade and supply chains will target opportunities to differentiate and build the information base around biodiversity products while creating strategic alliances for a more conducive trade environment

Piloting the ISSC-MAP medicinal plants standard

As part of LLS, IUCN is piloting and promoting trade in medicinal and aromatic plants according to the expert defined ISSC-MAP standard. This standard was developed by IUCN, WWF, TRAFFIC and BfN in response to a call from the private sector for a reliable and reputable standard to ensure sustainable sourcing of medicinal plants – a significant issue in pharmaceutical and related markets. Following rigorous review of this standard between 2004 and 2007, test sites were identified in 5 countries internationally, including Brazil, to develop practical and marketable models of sustainable use. In the Acre province of Brazil, the focus of the pilot will be on the use of popular and indigenous medicinal plants (vassourinha, pinhao branco, pinhao roxo and cats claw) by local communities, for local markets and potentially more widely. It will also engage collectors, consumers and some of the largest potential buyers in the region on a mutually agreed strategy for the sustainable supply of these medicinal plants. Should the pilot be successful, it is also expected to generate increased livelihood security and economic benefits for long time producers of these wild plants.

in key markets. In particular, this work will set out to distinguish biodiversity products and services from conventional commodities (e.g. intensively produced exotic timber or agriculture) and demonstrate their value to government development priorities and sustainable supply chains *(32)*. In turn, this information can be used to build the negotiating stance of biodiversity enterprises, promote investment and engage authorities on critical policy needs. In one example, IUCN is conducting a regional study on African timber flows to document weaknesses in the movement of timber across Africa. This information will then be used to improve coordination and cooperation across East, West, Southern and Central Africa and ultimately, enhance capture of timber profits, transparency, sustainability and benefit sharing along the supply chain.

Growing international demand for sustainable and ethical products also presents a significant opportunity for trade in biodiversity products. One of the best examples of how this interest has influenced trade in biodiversity products is through the emergence of niche market instruments such as eco-labels and ethical certification schemes *(33)*. The box describes one example – standards for medicinal plants, currently being piloted by LLS in Brazil. In addition to offering increased market access for sustainably produced biodiversity products, these schemes have also proven valuable in promoting increased returns to producers, enhanced standards of production and legitimacy for sustainable production. However, these measures can also present their own challenges in terms of costs, applicability and access for biodiversity enterprises. LLS is also working to test these market instruments and improve their relevance and benefits to biodiversity enterprises.

Influencing macroeconomic policy and planning

This component of the Markets & Incentives theme seeks to influence the planners and decision-makers who ultimately determine the policies, budgets and economic conditions under which forest landscapes are conserved or degraded. Key target groups include Ministries of Finance, Economic Planning, Treasury, sectoral and line agencies and financial institutions, as well as international development agencies and development banks.

One of the main concerns is to increase the priority that economic and financial planners accord to forest landscapes and livelihoods when they make decisions, formulate policies and allocate budgets. The theme is raising awareness and providing quantitative data about the economic and development gains from investing in conservation. Work is being carried out in LLS sites and countries to demonstrate how forest goods and services underpin many of the key development and policy goals that governments and donors are aiming to achieve (and that, conversely, forest degradation and loss act to undermine these goals).

Economic information and figures often prove particularly convincing to planners, and can exert a powerful influence over decision-making. As the box below shows, economic arguments have been used in one LLS country, Lao PDR, to make a case for greater investment in forest conservation, to counteract declining budgets and overseas funding.

On the policy side, efforts are being made to identify and overcome the perverse incentives and price and market distortions (such as those in agriculture, water and energy sectors and in relation to extractive industries) which discriminate against forest landscapes and livelihoods. At the same time, the theme is working to promote (on economic and development grounds) the use of policies which provide positive incentives and make conservation more economically attractive to governments, businesses and households.

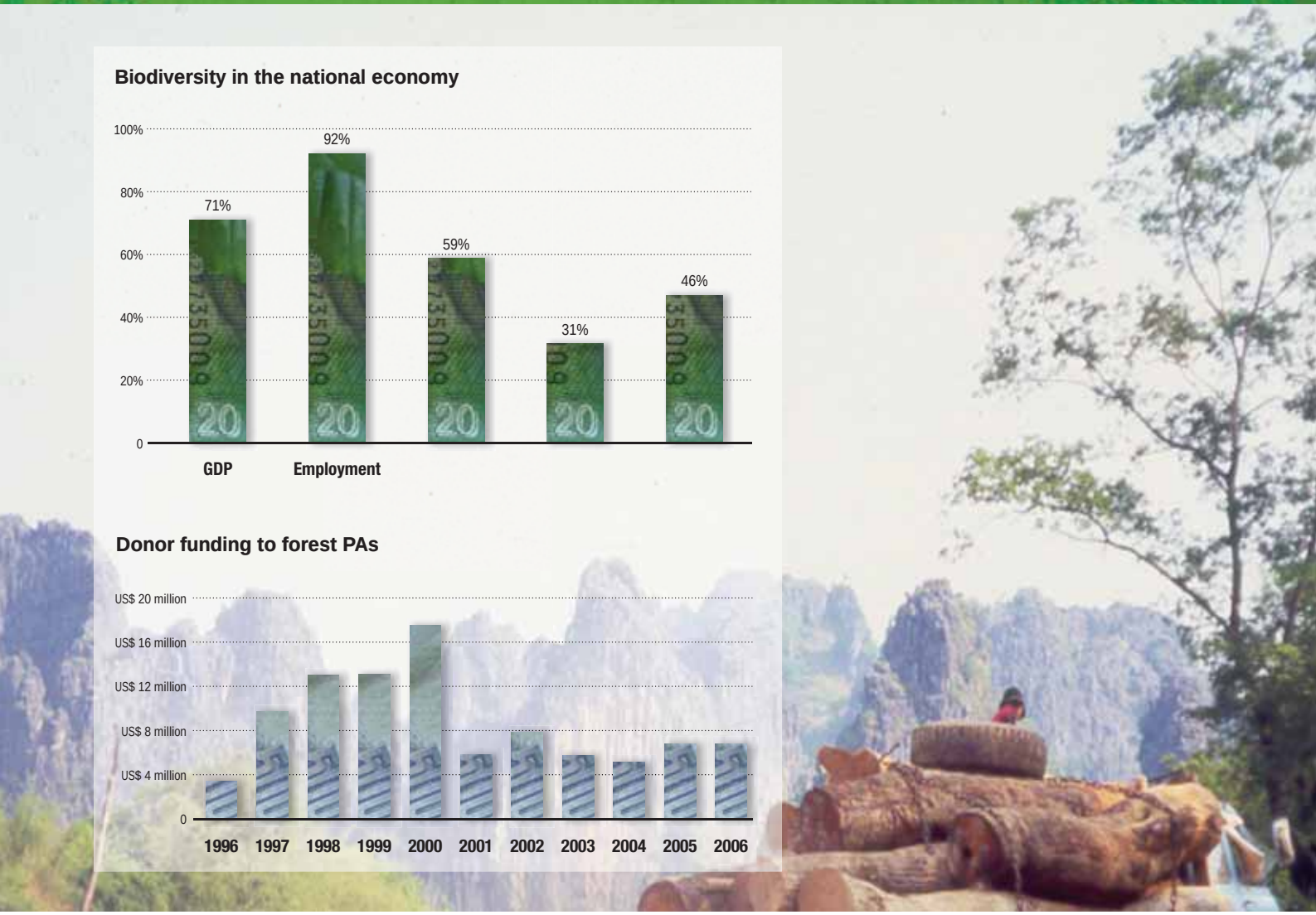
Another important area of influence relates to influencing on-the-ground programmes and projects. Conventional economic and financial appraisal and planning techniques do not usually account for environmental costs and benefits, or factor in livelihood activities which lie outside the formal market system. By working to mainstream forest landscape and livelihood values into programme and project appraisal and evaluation techniques, the theme intends to improve both the quality of economic planning processes, and the enhance the positive impacts of the development activities, technologies, infrastructure and investments that result from them.

Making the economic case for investing in forest conservation in Lao PDR

With the major aims of ensuring that adequate investment in forests and protected areas could be justified to economic planners and decision-makers in government and the donor community, an economic assessment was carried out as part of Lao PDR's National Biodiversity Strategy and Action Plan. The results underlined the importance of biodiversity to the country's key development goals as articulated in the Five Year Socio-Economic Development Plan and National Development Vision. They showed that biodiversity contributes almost three quarters of per capita GDP, more than 90% of employment, just under 60% of exports and foreign exchange, a third of government revenues and nearly half of foreign investment.

Yet both donor and government budgets to biodiversity have fallen drastically in recent years. There has been a major change in development policy and funding priorities – finance has been realigned towards economic growth, poverty alleviation and the MDGs. Budgets were shifted away from conservation. Today, funding to forest PAs is less than 40% of what it was in 2000, and continues to decline sharply.

The figures presented questioned the wisdom of these decisions. As forest landscapes make such a demonstrably important contribution to the national economy, failing to allocate adequate funds to their conservation may in fact undermine many of the goals that government and donor assistance aim to achieve: sustainable and equitable development for all.



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INTERNATIONAL UNION
FOR CONSERVATION OF NATURE

WORLD HEADQUARTERS
Rue Mauverney 28
1196 Gland, Switzerland
mail@iucn.org
Tel +41 22 999 0000
Fax +41 22 999 0002
www.iucn.org