

Overview of policy and financing instruments according to the four principles

Economic instrument	Steward Earns	Beneficiary Pays	Polluter Pays	Innovation	How it works	Case studies	useful guidance and resources
User fees & surcharges	☑	☑	☑	☑	<p>Imposes fees or charges for the use or consumption of goods, services or activities associated with the natural environment. These may be used to generate revenue, recover costs and/or manage demand. If the aim is to generate income, all or some of the fees are retained and reinvested in conservation (or channelled to fund the people who manage the land, resources or facilities for which charges are being made). Common examples of user fees include:</p> <ul style="list-style-type: none"> <li>• Protected area entry fees</li> <li>• Parking, waste disposal and sanitation fees</li> <li>• Timber royalties, fishing, hunting and trophy fees</li> <li>• Other resource-harvesting fees (firewood, medicinal herbs, wild plants, etc.)</li> <li>• Bioprospecting fees</li> <li>• Charges for the use of tourist facilities (climbing, hiking, camping, etc.), restaurant, hotel and land concessions and rental fees</li> </ul> <p>Clear ownership rights and legal frameworks (often in national law) are usually a precondition for imposing user fees. Where a group of people is involved, an agreed mechanism needs to be in place for allocating the resulting income.</p>	<p><b>Kenya:</b> Most private and community conservancies levy a hotel surcharge or bed tax. Across the twenty local conservancies and trusts included in Kenya’s Northern Rangeland Trust, annual payments totalling more than USD 0.5 million are used to pay for rangers’ salaries, educational bursaries and other ventures identified as a priority by local communities. (Northern Rangeland Trust 2014)</p> <p><b>Indonesia:</b> In 2001 an entrance fee and revenue retention system was introduced in Bunaken Marine National Park. The proceeds are used for management and conservation activities, e.g. just under a third of all revenue goes to fund a small grants programme for each of the villages in the park. (Erdmann et al. 2003)</p> <p><b>Lao PDR and Viet Nam:</b> Partnerships between the University of Illinois at Chicago, the international pharmaceutical company Glaxo Smith Kline, the National Centre for Science and Technology and Cuc Phuong National Park in Viet Nam, and the Traditional Medicine Research Centre in Lao PDR have been attempting to operationalise ethical models for bioprospecting, involving benefit-sharing arrangements, technology transfer, capacity building and community development (Soejarto et al. 2004)</p>	<p>The Convention on Biological Diversity (2001) published a draft on tourism user fees that helps to understand the different kinds of tourism fees and how the can be designed.</p>
Payments for Ecosystem Services (PES)	☑	☑			<p>Landholders or resource managers are rewarded or compensated for managing land and resources in a way that protects ecosystems and generates ecosystem services. Payments are made by the beneficiaries of ecosystem services, and may be provided in cash or in kind (e.g. via monetary payments, contributions of infrastructure, technical training, access to loans, etc.). Payments from beneficiaries can be direct (private-private, public-private) or intermediate (via taxes or fees).</p> <p>PES are most frequently made to regulating services such as water quality and supply, landscape enhancement, biodiversity conservation and disaster risk reduction.</p> <p>The generated funds can be used to provide additional income</p>	<p><b>Indonesia:</b> In Cidanau watershed, a steel company that relies on stable water provision pays groups of upstream farmers to plant trees in order to increase water quality and water regulation. (TEEBcase by E. Mbak 2010)</p> <p><b>Gabon:</b> Upstream communities and Monts de Cristal National Park receive payments from Société d’Energie et d’Eau du Gabon in recognition of the ecosystem services they provide to downstream hydropower and urban water supplies. (Emerton and Nlom 2011)</p> <p><b>Costa Rica:</b> The Procuencas PES programme receives revenues from a hydrological fee included in each user’s water bill and from partnerships with private companies. (TEEBcase by Redondo-Brenes and Welsh 2010)</p>	<p>The booklet ‘Laying the Foundation: An Analytical Tool for Assessing Legal and Institutional Readiness for PES’ (Hawkins 2011) offers an analytical framework for assessing legal and institutional readiness for PES transactions. Its intention is to offer public sector officials material that can be used to identify options and gaps within in their particular legal and institutional contexts.</p> <p>The ‘Payments for Ecosystem Services (PES): best practice guide’ (Smith et al. 2013) assists with the design and implementation of Payments for Ecosystem</p>

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					to the community and generate conservation incentives for resource users. Required conditions include clear and enforceable property rights and negotiated, binding agreements. Monitoring and transparency of delivery and administration of funds are crucial.		Services schemes. An Annex document provides some case studies. The following TEEB-website offers background information, technical guides and publications on natural capital accounting: <a href="http://www.teebweb.org/areas-of-work/advancing-natural-capital-accounting/">http://www.teebweb.org/areas-of-work/advancing-natural-capital-accounting/</a>
Carbon payments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		A special form of PES which involves the sale of certified emissions reductions (carbon credits), generated by undertaking activities which sequester carbon or which avoid or reduce carbon emissions.  Voluntary carbon sales often incorporate community and biodiversity objectives. Certifying and selling carbon credits is technically and administratively complex and often difficult for communities without outside assistance.	<b>China:</b> Gaoligongshan Nature Reserve Buffer Zone in China is being regenerated with native forest, to create a buffer zone between the nature reserve and surrounding communities. The scheme uses local labour and forestry farm plantation investment. Villagers earn income from forest products, and forestry farms earn carbon credits sold on the international voluntary market. (Kram et al. 2012)  <b>Kenya:</b> A community-led mangrove project, Mikoko Pamoja ('mangroves together'), is among the first coastal REDD+ initiatives in the world to receive accreditation. It involves reforestation and protecting mangroves, and establishing a Casuarina plantation to provide an alternative source of firewood and timber for local people. The scheme expects to capture about 3,000 tonnes of carbon a year, providing income of just under €10,000 from the sale of carbon credits on the global market. (Huxham et al. 2012)	The 'Guide to Building Redd+ Strategies: A toolkit for REDD+ practitioners around the globe' (WWF 2013) is designed to provide REDD+ practitioners and their local partners with the information necessary to develop national and sub-national strategies.
Direct payment (e.g. conservation concessions & contracts, compensation etc.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			People are provided with performance-based payments for undertaking agreed conservation actions, for instance to local communities in high biodiversity areas. These payments can occur within PES schemes, but they are often made by international agencies, governments, companies or NGOs and not necessarily by the beneficiaries of the ecosystem services. They typically focus on compensating the opportunity costs of foregoing a particular land or resource use in order to secure conservation goals. International conservation agencies paying people in developing countries to give up rights of access can cause controversies.	<b>Cambodia:</b> A series of direct conservation payment schemes has been instituted around Kulen Promtep Wildlife Sanctuary and Preah Vihear Protected Forest. These involve agri-environment payments, the development of wildlife-friendly products, and the provision of direct contracts for bird nest protection to local communities. (Clements et al. 2010)  <b>Tanzania:</b> Terrat Village has a voluntary agreement with Tarangire National Park tourism companies whereby villagers forgo tree-felling and conversion to agriculture and settlement. In return for maintaining savannah grassland as pasture instead, they receive funding for community development activities. (Nelson 2008)	The 'Direct Payments to Conserve Biodiversity' (Ferraro & Kiss 2002) paper describes and critically reviews a wide range of conservation incentives and direct payment schemes, including PES, conservation contracts and concessions.  The 'How should we incentivise private landowners to 'produce' more biodiversity?' (Hanley et al. 2012) paper discusses a number of policy options for providing private landowners with incentives to conserve biodiversity, such as conservation auctions and conservation easements and addresses various policy design problems.

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Taxes		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>Activities that use ecosystem services or run the risk of harming biodiversity and ecosystem services are subject to 'ecological' tax or to relatively higher tax rates. A key question is if relevant authorities have the political power to influence tax measures, which are often determined at state or national level. Feasible taxes include:</p> <ul style="list-style-type: none"> <li>Fuel taxes, taxes on pesticides and fertilizers</li> <li>Tourism taxes, fishing taxes, etc.</li> <li>Taxes on natural resources use</li> </ul>	<p><b>USA:</b> In California's Napa Valley, the local sales tax was increased to finance renaturalisation of the river and other flood protection measures. (TEEBcase by Kaitlin Almack 2010)</p> <p><b>Japan:</b> Forest beneficiaries in several prefectures pay an environmental tax to help improve forest management (TEEBcase by Kiichiro Hayashi 2010).</p>	The Guide 'Environmental Taxation. A Guide for Policy Makers' (OECD 2011) describes the design of environmental taxes and political economy considerations in their implementation.
Tax reliefs, subsidies	<input checked="" type="checkbox"/>				<p>The government supports products, technologies, investments and practices that minimise or prevent environmental degradation, or contribute towards conservation goals by relatively lower tax rates, tax exemptions, or subsidy payments. Tax reliefs and subsidies can support conservation objectives but are often decided at national or state level (may be outside of the project's scope). Examples are:</p> <ul style="list-style-type: none"> <li>Conservation tax credits</li> <li>Subsidies for organic farming</li> </ul>	<p><b>Japan:</b> Farmers who convert to producing rice without pesticides or chemical fertilisers in winter-flooded paddies are compensated with subsidies. (TEEBcase by Nishimiya 2010)</p> <p><b>South Africa:</b> Private land contracted as statutory conservation areas can benefit from income tax reduction on management expenses, deductions from income tax on value of land, and property rates exclusions. (CAPE 2009)</p>	
Voluntary donations and corporate sponsorship	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>Individuals or companies interested in conservation, or who benefit from ecosystem services, or accept that they play a role in the degradation of ecosystems, voluntarily sponsor activities that enhance biodiversity or channel funds to local communities. These arrangements often specifically target communities in high biodiversity areas, or are connected with the provision of a particular ecosystem service (such as the provision of clean water or erosion control). Sources can be:</p> <ul style="list-style-type: none"> <li>Crowd funding or lotteries</li> <li>Voluntary climate financing</li> <li>Corporate or foundation donations</li> <li>Mobilization of private donations</li> </ul>	<p><b>United Arab Emirates:</b> HSBC bank provided financial assistance for establishing the first protected mountain area in the UAE: Wadi Wurayah. The main goal was to assist the Fujairah Municipality and Government of Fujairah to create and manage a mountain Protected Area and set up a team of conservation rangers from local tribes. Funding was provided over three years to carry out biodiversity and habitat surveys, analyse water samples, consult with local communities, and develop a management plan (WWF 2015).</p> <p><b>Myanmar:</b> The Taninthayi Nature Reserve is funded by three gas pipeline companies: the Motamma Gas Transportation Company, Taninthayi Pipeline Company and PTT Exploration and Production. Payments are made as compensation (but not as direct offsets) for impacts on biodiversity along the pipeline route (Pollard et al. 2014).</p>	'Conservation investment blueprints: A Development Guide' by CPIC and PwC (2018) contains a very good glossary around conservation finance and useful information and guidance for developing investable conservation projects seeking private finance.

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Insurance schemes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Insurance schemes compensate local people for cost or damages related to conservation (e.g., crops or livestock eaten by wildlife). They often work in combination with other measures, such as direct payments for conservation actions or eco-tourism activities.	<b>Nepal:</b> An insurance scheme compensates villagers for loss of livestock to snow leopards. In return, the villagers ensure better herding practices to free up grazing land for natural prey. (TEEBcase based on Snow Leopard Trust 2010).	
Ecological fiscal transfers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Fiscal transfers redistribute revenues within or between public sector agencies (e.g., communal or sub national states) to help lower-tier governments with the cost of providing nature-related public goods and services. Redistribution occurs according to certain environmental criteria, including conservation measures. Payments thereby compensate for the costs of conservation measures (including opportunity costs) and reward the provision of public benefits of biodiversity and ecosystem services.	<b>Brazil:</b> Since the early 1990s, the Federal Constitution has allowed 25% of the revenue from taxing the circulation of goods, services, energy and communications to be allocated to municipalities. Of this share, a quarter is allocated according to criteria defined by each state, often including environmental characteristics. These include the size of the protected estate as well as a PA 'quality index' and using fiscal revenues to compensate for land-use restrictions for conservation purposes. (May et al. 2002)  <b>Philippines:</b> The Philippines Reforestation, Watershed Management, Health and/or Environment Enhancement Fund is a mechanism of the Electric Power Industry Reform Act of 2001 for returning hydropower revenues to catchment conservation. It is managed by the Department of Energy, and funded by government-imposed 'Social Responsibility' compensation paid by electricity generation companies levied at PhP 0.01 per kWh of production. These funds are accessed by means of annual work plans submitted jointly by the hydroelectric power company and the local government to the Department of Energy. (Rosales 2003)	Loft et al. (2016) 'The experience of ecological fiscal transfers' provides lessons for ecological fiscal transfers and an example from Indonesia.
Debt-for-nature swaps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		A portion of debt is forgiven in exchange for environmental conservation measures. These measures have most often been applied between national governments.  At local level, the challenge is to convince (commercial) banks as debt holders to participate.	<b>El Salvador:</b> Payments from a trust fund were used to reduce farmers' yearly debt repayments by up to 30 percent. In return, the farmers had to maintain traditional agro-forestry coffee production and refrain from logging. (Rainforest Alliance 2012).	The short summary on debt-for-nature swaps of UNDP (2015) explains the functioning of this instrument. Prerequisites, important stakeholders and further elements are included. The document also refers to various case studies (e.g. Georgia, Kyrgyzstan, Peru) and guidance documents.

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Benefit/revenue-sharing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<p>A flat fee or percentage of public revenues or private income streams generated from conservation products and services are shared with local residents. The intention is to recognise that local people play a key role in conserving the environment and enabling the revenue streams that are generated by it, and to provide them with positive incentives and tangible benefits to continue to do so.</p> <p>Benefit and revenue-sharing arrangements are commonly targeted at communities in areas of high biodiversity. Payments can be made as cash dividends, but more often funding is spent on development activities.</p>	<p><b>Pakistan:</b> The Community-Based Trophy Hunting programme, established in 1986 on tribal lands in Balochistan, aims to strengthen local incentives for the conservation of large mammals by generating revenues from hunting that can be shared with local communities. The hunting licence fee is fixed by the National Council for the Conservation of Wildlife (a federal agency of the Ministry of Wildlife) and hunting permits are auctioned in the national press and by internet. The fee has two components —20% is a licence fee paid to the Provincial Government and 80% is a trophy fee paid to the community where the hunt took place. (Iftikhar 2004)</p> <p><b>Cook Islands:</b> Takitumu Conservation Area, a community-owned ecotourism enterprise, has been established under the auspices of the South Pacific Regional Environment Programme. Only local people own the land and resources, and ecotourism has now become the area’s main economic activity. Profits are shared between the Conservation Area Coordinating Committee (for reinvestment in conservation activities) and landowning families (as dividends). Part of the revenue earned from ecotourism activities is paid to locals in compensation for reducing the local harvest of prawns and eels and the hunting of the Pacific fruit bat and Pacific pigeon. (Tiraa and Wilmott 2001)</p>	
Prizes, awards & other recognition	<input checked="" type="checkbox"/>				<p>Prizes, awards or other honours are used as a way of recognising and rewarding individuals, groups or villages/towns which display particularly good environmental practices and to motivate continued or enhanced conservation activities. These measures are also often used in combination with other incentive schemes or awareness raising campaigns.</p>	<p><b>Romania:</b> The village of Sinca Noua has declared itself to be the first ‘ecological village’ in the country, and the local council has elaborated a sustainable development strategy. This includes measures to strengthen small-scale traditional agriculture by certifying it as organic, the development of eco-tourism, the creation of Protected Areas, and the implementation of an environmental education plan for the local population. In recognition of these efforts, Sinca Noua was awarded the ‘European Village’ prize by the EU in 2005. (Sinca Noua Foundation and Stroming Ltd, 2005)</p> <p><b>Global:</b> The global Equator Prize is awarded each year to local and indigenous community initiatives that advance innovative solutions for people, nature and resilient communities. To date, 152 community organisations have been awarded the Equator Prize. The Equator Prize 2015 will showcase outstanding local and indigenous community efforts to reduce poverty, protect nature, and strengthen resilience in the face of climate change. (Equator Initiative 2015)</p>	

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<b>Fines, penalties &amp; legal liabilities</b>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>People who overuse, harm, or pollute the environment can be punished or legally obliged to pay for the damage they cause. The aim is to motivate individuals and companies to avoid or minimise environmental impacts or, if damage is already done, to oblige the responsible party legally and financially to compensate for it. Examples are fines for illegal fishing, hunting, or for not complying with environmental standards.</p> <p>Local enforcement strongly depends on the collaboration of relevant authorities and general compatibility with the law.</p>	<p><b>USA:</b> Hawaii imposed a fine for large-scale reef damage, using economic valuation to set the level of penalties. (TEEBcase by van Beukering and Cesar 2010)</p> <p><b>Vietnam:</b> Environmental fines, pollution charges, environmental protection fees, CDM/CER payments, environmental deposits and bonds are all earmarked for environmental protection. (Emerton 2010a)</p>	
<b>Deposits &amp; performance bonds</b>			<input checked="" type="checkbox"/>		<p>Individuals or companies undertaking activities which threaten the environment or require some form of mitigation, remediation or management plan are required to make a (usually refundable) deposit of funds against the expenditure involved. This money is earmarked for mitigating or compensating damage. This way it can be avoided that companies avoid paying for harm they are inflicting, for instance by filing for bankruptcy. Performance bond deposits can be used to compensate for socio-economic impacts as well as for environmental harm.</p>	<p><b>Philippines:</b> Within the Industrial Forest Management Agreement (IFMA), forest leases are awarded to the concessionaire who posts the highest performance guarantee bond to ensure that all obligations under the lease will be discharged. (UNEP 2009)</p> <p><b>Mongolia:</b> Companies granted mining licences must deposit a rehabilitation bond into a designated bank account before beginning any mining activity. The bond covers 50 percent of the estimated cost of restoring an ecological zone and is managed by the local government. The expenditure deposit must cover the approved closure plan for the mine, and the developer is required to take certain measures in relation to environmental protection and reclamation during the closure of the mine or plant. (Centre for Social Responsibility in Mining 2014)</p>	<p>Kuusela et al. (2016) review the possibilities of performance bonds in forestry with regard to certain sustainable practices, quality standards or water quality for different policy scenarios.</p>
<b>Auctions &amp; tenders</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>Auctions are a mechanism to decide which landowners receive a contract that pays them to change land use and carry out landscape conservation measures on their land. So several landowners make competing propositions or bids for the price they ask to implement conservation measures and a buyer (government or private) will decide which one to accept (usually lowest price for comparable measures).</p> <p>Auction mechanisms have been applied mainly in developed countries, also since their implementation requires administrative capacity. An advantage is that local government agencies get clear information about the costs of conservation actions.</p>	<p><b>USA:</b> In 1980, New Jersey established Tradable Pinelands Development Credits to limit development in environmentally sensitive areas and allow prospective developers to trade for development rights on available land. (Landell-Miles and Porras 2002)</p> <p><b>Australia:</b> New South Wales achieved cost efficiency by using nutrient trading to allocate responsibility among three sewage treatment firms. (UNEP 2009, p. 151)</p>	<p>'Auctions for conservation contracts: an empirical examination of Victoria's Bush Tender trial' by Stoneham et al. (2003) summarizes the outcomes of an Australian pilot study on auctioning conservation contracts. It discusses potentials, practical problems, different auction designs and possible benefits for nature conservation on private land.</p>

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<b>Biodiversity off-sets, habitat/mitigation banking</b>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<p>Companies whose activities damage biodiversity or destroy natural habitats (e.g. agriculture, forestry, oil and gas, mining, transport or construction) invest in biodiversity conservation elsewhere in order to balance or compensate for damage. Biodiversity offsets are usually pursued (e.g. through bio banking or wetland banking) as a final step after on-site environmental harm has been reduced and alleviated as much as possible ('mitigation hierarchy').</p> <p>When a conservation bank (or 'mitigation banking') is established, a landowner who acts to conserve the natural habitat is seen as making a deposit in the bank and receives credits. Another landowner who wants to develop the habitat or otherwise impact on it must purchase a credit from the bank. Schemes are often determined by national law and require high transaction costs for setting up and management.</p>	<p><b>Germany:</b> The law obliges project developers to offset impacts on landscapes and biodiversity by renaturalising comparable habitats. (ten Kate et al. 2010b)</p> <p><b>Australia:</b> A biodiversity banking scheme encourages companies to voluntarily mitigate their environmental impact by supporting conservation projects elsewhere, by buying so-called credits from them. (TEEBcase by Rodricks 2010)</p> <p><b>USA:</b> A wetland banking schemes in California allows developers who destroy wetlands to offset the environmental damage by paying to protect a sensitive wetland in another location. (Office of Policy, Economics, and Innovation and Office of Water 2005)</p>	<p>The report 'The use of market-based instruments for biodiversity protection – the case of habitat banking' (ten Kate et al. 2010a) identifies a range of information and experience with habitat banking from around the world and from economic theory, and provides an institutional analysis for practical implementation.</p> <p>The Business and Biodiversity Offsets Programme (BBOP)(2012) has produced a series of guidelines to help developers, conservation groups, communities, governments and financial institutions seeking to consider and develop best practice related to biodiversity offsets, including: Biodiversity Offset Design Handbook, Biodiversity Offset Cost-Benefit Handbook and Biodiversity Offset Implementation Handbook.</p>
<b>Green products &amp; markets (alternative income &amp; employment sources)</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>Income streams are developed from products based on the sustainable use of land and natural resources, which use environmentally-friendly production processes, or which replace environmentally-damaging sources of income and employment. This may involve reforming existing products and markets or establishing new ones.</p> <p>Common examples of products with benefits for conservation include:</p> <ul style="list-style-type: none"> <li>• Wild nature-based products (e.g. honey, fruits, natural cosmetics, handicrafts)</li> <li>• Domestication of wild species (e.g. flowers, medicinal plants, commercial species)</li> <li>• Sustainable eco-tourism, private protected areas</li> </ul> <p>External assistance is often required to assist communities in identifying new products and markets, sourcing investment capital, and developing commercially viable business plans.</p>	<p><b>Rwanda:</b> A high-end gorilla tourism lodge has been established. It is owned by the local community but under a management contract given to a private sector company, with initial capital provided by the US government. Under the agreement, the local community provided land for the lodge, and receives income from its operation. Among these revenues is a US\$56/night bed tax which earns around USD 250,000 a year for community activities. This money has been invested in basic infrastructure such as roads, rural electrification, rainwater harvesting, and the further development of local tourism-based enterprises. Community members benefit from employment in the lodge and related businesses. (Emerton and Nlom 2011)</p> <p><b>Syria:</b> Rural communities are developing a market for caper bushes, a wild plant species which grows abundantly in dry and rocky areas. The caper buds are collected and sold, particularly by resource-poor nomadic families living in the desert. Such wild biological resources provide a much-needed and easily accessible source of income. (Giuliani et al. 2006)</p>	<p>The 'landscapes investment and finance toolkit' of Ecoagriculture Partners and IUCN NL helps to identify and develop business cases as well as finding suitable and willing investors. It provides understanding of linking financial investment and landscape management and how to coordinate finances at landscape scale. The manual (<a href="https://liftkit.info">https://liftkit.info</a>) leads through the process of prioritizing for certain investments and weighing up their potential outcomes and risks in terms of financial success and sustainability (building a business plan).</p>

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<b>Certification &amp; eco-labelling</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>Eco-labelling and certification are voluntary trademarks awarded to products, services, processes or financial products deemed to be environmentally sustainable. The idea is to enable them to charge a price premium and reach new markets – thus providing an incentive for businesses to operate in a way compatible with biodiversity conservation. Common examples include sustainable fisheries, timber, eco-tourism, organic agriculture and sustainable supply-chain management. There are often high transaction costs involved in receiving certification and complying with monitoring procedures of internationally recognized labels. Certification based on local production can be an option for smaller-scale local initiatives.</p>	<p><b>Japan:</b> The local Oriental White Stork scheme allowed successful reintroduction of the white stork into Japanese rice paddies by increasing payments to farmers who change to ecological rice production. (TEEBcase by Hayashi and Nishimiya 2010)</p> <p><b>Latvia:</b> An eco-labelling initiative named the Green Certificate is being implemented by the Latvian Country Tourism Association and the Latvian Environment Protection Fund. It aims to promote environmentally-friendly tourism in rural areas and also to improve the quality of life of local communities. The Green Certificate is assigned to enterprises which conserve biodiversity, minimise resource use, offer environment-friendly tourist activities, serve locally produced food, and provide extensive information on local natural, cultural and historical attractions. (Latvian Country Tourism Association 2005)</p>	<p>The Fairtrade (2007) guide helps you design and carry out an Internal Control System (ICS) so that Small Farmers' Organization can meet environmental standards for certification.</p>
<b>Green credit &amp; loans</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>Credit and loans or preferential terms and conditions are explicitly granted to green products and enterprises, or may stipulate certain environmental requirements in their terms of agreement.</p> <p>Small-scale loans have particular application for local communities. They are useful to marginal groups who lack the collateral or other conditions required for conventional loans. Lending institutions can be commercial banks with a sustainability focus or a micro-finance unit, community finance, or government funds.</p>	<p><b>Russia:</b> In the Katunsky Biosphere Reserve, micro loans have been used for producing and packing organic local products, primarily mountain honey. Borrowers established a non-governmental association of honey producers, and average income among project participants increased by about 30%. Eco-agricultural farming practices have been promoted and local agricultural products are registered as a trade mark and marketed using the official logo of 'Reserve Katunsky', allowing them to access premium markets and prices in Moscow, St. Petersburg and Novosibirsk. (Emerton 2008)</p> <p><b>Sudan:</b> In the Gedaref and Kassala states, the establishment of a revolving micro-credit fund for biodiversity enterprise development has enabled villagers to develop new trade in Gum Arabic and other non-timber forest products. (Emerton 2012)</p>	<p>Chapters 2 and 3 of the publication 'Credit enhancement for green projects' by Aravamuthan et al. (2015) present case studies and examples where development banks enhanced credit schemes for green infrastructure projects.</p> <p>Lopes and Lowery (2015) explore the role of rural credit in promoting agricultural sustainability in Brazil, looking at the trends, opportunities, and difficulties in different categories of rural credit, regarding the creation of sustainability-related credit lines, interest rates, and sources of funds.</p>



## Acting on Ecosystem Service Opportunities – A Guideline

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<b>Green investment facilities (conservation bonds, green investment funds, blended finance, etc.)</b>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<p>These are larger-scale sources of credit and investment for green or biodiversity-based enterprises. Example are air pollution funds, climate funds, blue bonds, green bonds, biodiversity enterprise funds, or various impact investment facilities. While most of these facilities operate on a commercial basis, some provide funding on preferential or concessional terms. Bonds for instance are tradable capital market instruments issued by sovereign governments, states, municipalities or corporate entities to raise upfront funds, backed up by the promise to repay the investor the value of the bond plus periodic interest payments.</p> <p>The minimum amount of capital or credit offered may be too large for small-scale or microenterprises. They are often used to fund partnerships between larger companies and local communities, or to promote businesses which operate fair trade or other ethical practices. "Blended finance" combines commercial investments with philanthropic funding, for instance in order to cover transaction or monitoring costs or to compensate for lower returns of more ecological production.</p>	<p><b>Africa:</b> Verde Ventures provides loan, equity and grant financing for conservation-oriented businesses, including marine eco-tourism in Mozambique, chocolate production in Ghana, garment eco-factories and agro-industry in Kenya. (Conservation International 2014)</p> <p><b>USA &amp; Latin America:</b> EcoEnterprises Fund was established in 1998 as a venture capital fund targeting community-based sustainable businesses in rapidly expanding environmental sectors such as organic agriculture, ecotourism, sustainable forestry, and non-timber forest products. Ecosystem Investment Partners is a private equity management firm established in 2006 to acquire conservation properties and generate investment returns through wetland, stream and endangered species mitigation opportunities in the United States. The Amazon Carbon and Biodiversity Investment Fund is run by Bio Assets, the successor of a large Japanese forestry company, and focuses on investing its own and third party capital into developing and implementing carbon, biodiversity, renewable energy and biofuels projects in Brazil. (Emerton 2015)</p> <p><b>Korea:</b> In 2014, the Export-Import Bank of Korea issued a USD 500 million green bond, to finance low carbon and climate resilient growth projects. (Emerton 2015)</p>	<p>Spergel &amp; Taïeb (2008) provide in 'Rapid Review of Conservation Trust Funds' a comprehensive global review of best practices and lessons learned in the development and implementation of conservation trust funds.</p> <p>A webinar of the 'BIOFIN' initiative explains the functioning of green bonds as an opportunity for financing biodiversity (<a href="https://youtu.be/rzLprdYG_1g">https://youtu.be/rzLprdYG_1g</a>).</p>
<b>Allocation of land/resource management &amp; usage rights</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<p>The allocation of clear, secure and enforceable use and/or management rights is often a prerequisite for the implementation of other policy instruments in local communities. It can also promote feelings of ownership, responsibility, and long-term thinking among land-holders. On the other hand, the responsibilities of private land-holders with respect to the social and environmental consequences of their activities need to be taking into account, for instance by certain restrictions (e.g. no logging in slopes or next to waterways, no deforestation, etc.).</p>	<p><b>Slovenia:</b> The Nature Protection Law allows PAs to be managed via commercial management concessions and stewardship agreements run by companies or NGOs. For example, the management of the Nature Reserve Škocjanski has, been entrusted to the biggest nature protection NGO in Slovenia, while SOLINE Pridelava Soli d.o.o (Salt Production Co. Ltd.) manages Secovlje Salina Nature Park. (Sovinc 2005)</p> <p><b>Namibia:</b> Wildlife management and utilisation rights have been devolved to local people under the community-based natural resource management (CBNRM) programme. This is a joint venture between Government and non-government institutions, communities, community-based organisations and development partners. The programme aims to provide incentives to communities to manage and use wildlife and other natural resources sustainably and productively. In the first ten years of its operation, up to 2007, more than fifty community wildlife conservancies were registered,</p>	

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						<p>involving 118,700 km<sup>2</sup> of communal land that is home to about 221,000 people. In 2007 the Ministry of Environment &amp; Tourism passed a national policy for granting tourism and wildlife concessions on State land, including in Protected Areas. The policy awards concessions for poor rural communities in or near parks, especially conservancies, enabling them to benefit directly from tourism and wildlife utilisation (e.g. hunting or cropping) in recognition of their wildlife and land management role and reduced livelihood options. (Brown and Bird 2011)</p>	
<p><b>Environmental training &amp; education programmes</b></p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Training and education is often a prerequisite for the implementation of policy instruments. For example, it may enable entrepreneurs and producers to take up new practices or technologies, trigger behavioural change, or increase consumers' awareness for the range of options open to them and the positive benefits of green products and practices.</p>	<p><b>Nepal:</b> In the Terai region, environmental and health measures were tackled in a collaborative and integrated manner, combining community forest management, promotion of biogas to decrease deforestation, measures to improve quality of sanitation and drinking water, and health education programmes to raise awareness about HIV/AIDS and family planning. (TEEBcase by Almack and Chatreaux 2009)</p>	<p>Harvey et al (2013) deals with social learning with respect to climate change adaptation. The theoretical introduction to social learning is accompanied by a review of social learning processes for climate change and natural resource management and useful examples of documented projects.</p> <p>Butler et al. (2013) present RARE's "Pride campaign" approach for changing the way communities relate to nature. It aims to inspire people to take pride in the species and habitats that make their community unique, while also introducing practical alternatives to environmentally destructive practices.</p>
<p><b>Quotas &amp; licenses</b></p>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<p>Quotas that restrict the extraction or usage of natural resources can limit the environmental damage to a certain, sustainable level, e.g.</p> <ul style="list-style-type: none"> <li>• access to specific locations (e.g. climbing routes, protected areas, camp sites, herding and grazing concessions)</li> <li>• natural resource use (e.g. fishing, hunting, timber harvesting, non-timber forest products, wetland use, water extraction, tourism)</li> </ul> <p>Quotas can be sold or auctioned and thereby also generate extra income for conservation efforts. Revenues from licenses which generate an extra income that can be channelled to</p>	<p><b>New Zealand:</b> To ensure sustainable management of fish stocks, the government has introduced a system of tradable fishing quotas under the Fisheries Act 1986. Every year the Fisheries Ministry sets a new Total Allowable Catch (TAC), based on biological assessment of the stock, which is handed out as 'individual tradable quotas' to fishing companies. Companies are free to decide whether to use their quota (catch fish) or to sell or buy remaining quotas depending on their profits per catch. (source: TEEB – <i>The Economics of Ecosystems and Biodiversity for National and International Policy Makers</i> (2009).</p> <p><b>China:</b> China's first water use rights system with tradable water use quotas was launched in 2002 (Zhangye City, Ganzhou District,</p>	<p>The World Bank publication 'Getting to Green' provides guidance notes on environmental licensing (Pedro &amp; Stump2012) with requirements, instructions, and examples for designing and distributing environmental licenses.</p>

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					environmental causes and projects related to conservation.	Gansu Province) as part of a national water saving project. Water use rights certificates were distributed to counties and irrigation districts, and subsequently to townships, villages and households. In Minle County, each irrigation district distributed water rights certificates to households based on land area and a water resource deployment scheme which was checked, ratified and strictly enforced. (source: TEEB – <i>The Economics of Ecosystems and Biodiversity for National and International Policy Makers (2009)</i> ).	
Privately protected areas (PPAs) & Conservation easements	☑	☑		☑	<p>Privately protected areas can be under governance of private, non-governmental, commercial, research, indigenous or religious entities and are predominantly managed for biodiversity conservation. The non-state ownership relieves the state of purchasing the land (often by private or regional trust funds) in order to establish a protected area. In case of government’s recognition of a PPA the management costs are often shared between the state and the non-state entity. PPAs can be managed under for-profit or not-for-profit schemes.</p> <p>A conservation easement is a restriction placed on a piece of property to protect its associated resources. The easement is voluntarily agreed, can generate tax credits, or can be sold by the landowner. It limits certain types of uses or prevents development from taking place on the land in perpetuity while the land remains in private hands. Easements protect land for future generations while allowing owners to retain certain private property rights. Conservation easements are traditionally incentivised with tax breaks.</p>	<p><b>Brazil (Minas Gerais):</b> A non-profit civil society, the “Instituto Terra” works in the recovery of degraded Atlantic Forest areas and recovering water sources from the region known as the Rio Doce Water Basin, one of the most environmentally impacted from Southeast Brazil. Founded in 1998, the reforestation of 608,69 hectares is now known as the “Private Reserve of Natural Heritage Bulcão Farm”. (<a href="http://www.institutoterra.org/">http://www.institutoterra.org/</a>)</p> <p><b>Chile:</b> ‘Conservacion Patagonica’ bought 200,000 acres in the Chacabuco Valley to later donate it to the Chilean agency for parks and thereby turning it from a degraded and overgrazed sheep ranch to a potential national reserve. CONAF, the Chilean agency in charge of parks, had listed the Chacabuco Valley as a top conservation priority for 30 years due to its biological importance but it lacked access to the funds necessary to acquire this privately-owned land. <i>IUCN (2014). The Futures of Privately Protected Areas.</i></p> <p><b>Spain:</b> ‘Foundation Catalunya - La Pedrera’ (FCLP) owns a network of 24 natural sites (7,800 ha purchased), called Xarxa Espais Natura, which is Spain’s largest privately owned network, almost all within the Natura 2000 Network and other lands with conservation agreements. The total land equals 5.18% of the Catalonia region. <i>IUCN (2014). The Futures of Privately Protected Areas.</i></p>	<p>The IUCN publication on ‘The Futures of privately protected areas’ by Stolton et al. (2014) offers an comprising explanation on PPAs and in chapter 7 various examples are presented in detail.</p> <p>Chapter 3 of the IUCN-published ‘Guideline for Applying Protected Area Management Categories’ by Dudley (2015) provides information on private or indigenous governance of protected areas.</p>

Sources: CATIE (2012), UNEP (2004), UNEP (2009), CFA (2008)