

# Big profit from nature protection

By Richard Black

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Societies gain financially from leaving forests intact rather than clearing them

## Money invested in protecting nature can bring huge financial returns, according to a major investigation into the costs and benefits of the natural world.

It says money ploughed into protecting wetlands, coral reefs and forests can bring a hundredfold return on capital.

The Economics of Ecosystems and Biodiversity study (Teeb) is backed by the UN and countries including the UK.

The project's leader says governments should act on its findings at next month's UN climate summit.

Teeb is the first attempt to evaluate the economic value of "ecosystem services" - things that parts of the natural world do for free, such as purifying drinking water or protecting coasts from storms - on a systematic and global basis.

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"We have now evaluated 1,100 studies ranging across different countries and different ecosystem services," said study leader Pavan Sukhdev, a Deutsche Bank economist.

"And we find that with protected areas, for example, no matter how you slice the figures up you come up with a ratio of benefits to costs that's between 25-to-one and 100-to-one.

"Now we can say quite confidently that there is a solid benefit from investing in protected areas," he told BBC News.

### Watery world

The project's initial tranche of work focussed on forests, finding that the ongoing loss of forest comes with an annual pricetag of US \$2-5 trillion, dwarfing the banking crisis.

The new analysis takes the economists to the undersea realms of fisheries and coral reefs.

Conservation groups have repeatedly called for a vast expansion in protection for marine ecosystems, both to conserve biodiversity and as a longer-term boost to fisheries yields.

Mr Sukhdev said there was a powerful economic case for this as well.

"If we were to expand marine protection from less than 1% to 30%, say, what would that cost?

"Establishing reserves, policing them and so on, would cost about \$40-50bn per year - and the annual benefit would be about \$4-5 trillion."

The benefits would come from increasing fish catches and tourism revenue and - in the case of reefs - protecting shorelines from the destructive force of storms.



Palau recently decided that economics favour protecting, not killing, sharks

"The Teeb report is hugely significant in showing that [loss of nature] is inextricably linked with a sustainable worldwide economy, and we warmly welcome the call upon policymakers to accelerate, scale-up and embed investments in the management and restoration of ecosystems," commented Stephen Hopper, director of the Royal Botanic Gardens at Kew. The study says protected areas need to be chosen carefully, as they are on land, and concentrated in areas of ecological and economic importance.

Other examples given in the report include:

- a Costa Rican study showing that areas of intact forest increase the yield of coffee farms by 20% because they shelter pollinating insects
- a grassland conservation area in New Zealand that supplies the Otago region with free water that would cost \$100m per year to bring in from elsewhere
- in Vietnam, planting and protecting nearly 12,000 hectares of mangroves cost the government \$1.1m but saved annual expenditures on dyke maintenance of \$7.3m

### **Forest call**

Although individual economists have made these arguments before, Teeb aims to draw all the evidence together and present it to policymakers, hoping it can persuade governments to invest in nature protection just as the Stern Review made the economic case for tackling climate change.

"We show that the failure of markets to adequately consider the value of ecosystem services is of concern not only to environment, development and climate change ministries but also to finance, economics and business ministries," says the report.



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#### Biodiversity at base of economics

"Evidence presented here shows pro-conservation choices to be a matter of economic common sense in the vast majority of cases."

Some governments are on board already: Germany - which initiated the project in 2007 - Norway, and the UK.

"This report really highlights the need to understand the part nature plays in sustaining our economy as we go into the International Year of Biodiversity," said UK Environment Secretary Hilary Benn.

"By showing how we can place an economic value on biodiversity, it will help us to do the right thing nationally and internationally - not just to respond to the growing crisis of biodiversity loss, but also to deal with climate change."

At next month's UN climate summit in Copenhagen, governments are likely to finalise a process for financing forest protection as a cheap way of curbing carbon emissions.

Teeb's conclusions give economic backing to calls from conservation and indigenous peoples' groups for this process - Reducing Emissions from Deforestation and forest Degradation (REDD) - to encourage ecologically sound forest management, rather than simply aiming to absorb carbon dioxide.

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