

To conserve rainforest, we have to help local people live sustainably

Sir — We disagree with Gullison *et al.* who argued in their Commentary “Marketing” species conservation¹ that the Convention on International Trade in Endangered Species (CITES) should be restructured to protect mahogany (*Swietenia macrophylla*). In our view, CITES has been effective in regulating international trade of some species endangered with biological extinction.

Although logging can have catastrophic impacts on forest ecosystems, few internationally traded tropical hardwood species are threatened with extinction. Of the ten most important tropical hardwoods imported to the United Kingdom, only *S. macrophylla* is listed by CITES (in its Appendix III). Logging has been accused of causing the local extinction of mahogany². However, we have recently conducted 100 per cent inventories of mahogany trees in three, conventionally logged areas in two different forests in Brazil (unpublished data). Mahogany survived logging in all three areas (Table 1), but few trees are yet of commercial size. In these forests, mahogany is not threatened with biological extinction, but further exploitation is unlikely to be profitable for many years.

Although forests are logged tens to hundreds of kilometres from centres of the timber trade³, large areas of mahogany’s vast natural range⁴ remain remote and unexploited by commercial logging. Mahogany is widely planted around the tropics, and there are now promising solutions to its silvicultural problems^{5,6}. Mechanisms other than CITES need to be found to curb destructive logging in tropical rainforests and to ensure the sustainable management of commercial species, such as mahogany, which are not yet endangered.

Gullison *et al.* argue that the rate at which sustainable forest-management practices are being adopted is too slow to save many species. They recommend that organizations in the developed countries should buy and protect tracts of tropical forest as a safety net if other measures continue to be ineffective in areas of rapid forest decline. Although this strategy may be effective in the short term, we do not believe that it is viable in the long term. Unless alternatives can be found to the unsustainable exploitation and clearance of forest, such protected areas will become increasingly isolated and vulnerable to illegal logging, fire and occupation.

Illegal logging is widespread in the tropics⁷. Even legally logged forests are often repeatedly and illegally relogged for residual timber, unless they are well protected. Illegal occupation of forest is also common. Many

Table 1 Density of mahogany in two forests in Pará state, Brazil

Location	Years since logging	Trees per ha	Stumps per ha
Marabá	14	0.06	0.03
Rio Maria	10	0.66	1.29
Rio Maria	7	0.40	0.45

Density of *Swietenia macrophylla* stumps and trees ≥ 15 cm diameter in three 300-ha logging coupes in two different forests

tropical rainforests lie adjacent to burgeoning human populations. In Pará, Brazil, landless people have recently occupied private forest reserves, government-owned research forests and privately owned production forests. Who will pay for long-term protection as the agricultural frontier advances? Some Pará landowners have hired gunmen to protect their property, a strategy that is unlikely to be palatable to many conservation organizations.

Although it may be cheap to lease logged forests, Gullison *et al.* ignore the high cost of long-term protection. Leasing is not an option in the Old World tropics where forests are state property. The leasing proposal would not slow the rate at which new forests are penetrated by logging roads, ‘mined’ for mahogany and thereby made accessible to land conversion.

Alliances between conservationists and local communities have rarely proved successful in the long term. For example, the Projeto de Estudio para el Manejo de las Areas Silvestres de Kuna Yala in Panama initially received funding of US\$1.2 million and had a high international profile. However, within a few years the money had run out as there was no planning for the long-term financial sustainability of the project and no systematic fund-raising⁸.

We believe that the only viable strategy for conserving large areas of tropical rainforest is to find sustainable livelihoods for rural populations and to control destructive logging through marketplace initiatives. Sustainable management of tropical rainforests, including the control of illegal logging, fire and land occupation, is therefore a necessary precondition for successful conservation. Totally protected areas are doomed if they ignore the surrounding land-use issues.

Sustainable exploitation is increasingly being forced by consumer pressure. Europe will now only import tropical timbers certified as sustainably produced by bodies such as the Forest Stewardship Council, an international non-profit organization.

Rather than buying reserves, conservation bodies may be better advised to spend their money in offsetting the high costs of such certification and in educating consumers to pay premium prices for credibly certified timber.

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Impact factors aren’t relevant to taxonomy

Sir — Evaluating research by means of ISI impact factors — those determined by the Institute for Scientific Information in Philadelphia — gives rise to obvious problems in the case of basic biodiversity research. Valdecasas *et al.* in Correspondence (*Nature* **403**, 698; 2000) suggested that one cause is the low citation rate of taxonomic articles compared to other fields.

A more important reason, however, is the inapplicability of this index to basic biodiversity research on principle.

The impact factor generally underestimates the number of citations because of the limited number of scanned journals. In fields such as molecular genetics, neuroscience or cancer research — where, as Bradford’s law states, most of the relevant work is published in a few core journals — this selection does not severely affect the comparability of impact factors.

However, Bradford’s law does not apply to taxonomy and other areas of basic biodiversity research. Generally, taxonomic papers contain details of nomenclature, which must be considered and discussed whether the paper is excellent or poor. Similarly, reports of flora and fauna records need to be debated in further studies before being accepted or rejected. Quality and relevance are independent parameters.

Therefore, it is impossible to classify taxonomic or ecology journals as more or less important. They can only be classified as of high or low quality, which does not affect the number of citations. Many natural history journals contain taxonomic or similar articles. The library of London’s Natural History Museum alone holds 11,000 serial titles,

most of which come under this category, and each may contain relevant information. About 1,000 entomological journals are held by the Natural History Museum's entomology library, but only 65 are covered by the expanded Science Citation Index (SCI). Because some 93 per cent of potentially relevant journals are not considered, it is good luck rather than a sign of good quality to be included in the SCI.

The impact factor is a powerful and welcome tool in some disciplines. In basic biodiversity research, however, it is not applicable. Qualified referees must evaluate the scientific work itself.

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We have moral authority to apologize for the past

Sir — Your editorial “Hollow apologies should be avoided” (*Nature* **403**, 813; 2000) noted that Hubert Markl, president of the Max Planck Society (MPS), “is right to resist pressure to apologize” for the participation of German scientists in Nazi experiments.

Subsequently, Bernd Wirsing of the MPS wrote (*Nature* **404**, 222; 2000) that “President Markl has already publicly apologized”, although reference to the MPS website reveals that this apology is weakened somewhat by circumlocutory equivocation. The issue of apology by proxy remains relevant in this context and in others.

The Pope and President Wahid of Indonesia have recently apologized for the sins and crimes of their predecessors, but the Australian prime minister, John Howard, has consistently refused to apologize to Aboriginal Australians for generations of abuse and neglect by governments. Howard's rationale is much the same as that put forward in *Nature's* editorial: the successors of those who committed crimes in the past do not have the moral authority to apologize on their behalf.

Such caution is mistaken. Consider an analogy: if one were enfeebled or incapacitated, it would be reasonable to place one's affairs in the hands of an attorney who would then assume one's legal powers and exercise them in one's stead for one's good.

Markl is the president of the organization that fully took over the members of its predecessor, the Kaiser Wilhelm Society, under whose auspices experiments on human beings took place. Markl is in the position of acting for a morally incapable predecessor. The Kaiser Wilhelm Society was morally deficient in using children and other Nazi victims in its experiments. Recalcitrant

members might well refuse to acknowledge the wrongfulness of their actions or to ask for forgiveness. So indeed, might many of our forebears and contemporaries in this country.

But the MPS and Australia's leaders are not deficient in that respect. They can act as the rightful exercisers of moral authority here, and they ought to do so precisely on the grounds that Markl advances: that those who performed experiments on humans or so egregiously treated Aborigines were deficient in their moral understanding and certainly incapacitated from making a genuine apology.

Finally, it is wrong to argue that an apology needs to be made only to the survivors of atrocious policies and practices. It surely needs to be made to all the descendants of those who were affected — survivors or the murdered — and to the rest of humanity.

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Offside researchers score an own goal

Sir — In an astounding analysis of the failure of assistant referees to judge offside situations correctly (R. D. R. Oudejans *et al.* *Nature* **404**, 33; 2000), a group of soccer scientists from — almost inevitably — the Netherlands define the object of their study thus: “In football (soccer), a player is ‘offside’ if he or she is closer to the goal than the last defender (excluding the goalkeeper) when the ball is passed to them.”

However, ‘offside’ in football depends on an attacker's distance from the goal line (the line forming the boundary of the pitch on that side, on which the defending team's goal is placed) rather than from the goal itself. Moreover, with respect to the offside rule the goalkeeper has the same status as any other player. Could it be that, in reality, assistant referees err so often because they don't know the rules of the game any better than those who conduct scientific studies on the rules?

For the correct rule see <http://www.fifa2.com/scripts/runisa.dll?s7.6750696:gp:919357:67173+refs/laws/law11> — or ask somebody in the nearest pub.

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Let Armenia show why it's the place for Sesame

Sir — Organizers of the proposed new research centre for the Middle East, Caucasus, Mediterranean and Gulf region, which will be based around the Sesame synchrotron, are saying it will be built in Jordan (*Nature* **404**, 798; 2000). But the decision has not yet been officially made — and at the Interim Council meeting in Geneva, on 10 and 11 April, both Jordan and Armenia were chosen as likely sites.

I believe it is a violation of fair and objective selection practices for organizers of such an important international site to show this bias towards Jordan before the final decision has been made.

As chairman of the Armenian Committee for Sesame, established by the Republic of Armenia, I suggest that an independent panel of accelerator experts from around the world should visit both sites. They could then make an evaluation on the basis of each country's technical expertise and government commitment, and assess which offers the quickest and most economical way to make the project operational.

Armenia and Jordan have submitted their list of advantages. Let the independent panel review each item carefully and make their recommendation to the Sesame Interim Council and to Unesco. The birth of an international centre such as Sesame deserves this careful and fair process. For more information, please visit our website at www.natureswonder.com/sesame.

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Giving Arabs credit for Persian works (again)

Sir — I'm afraid the Book Review of Jean-Luc Chabert's *A History of Algorithms* (*Nature* **403**, 703; 2000) contains the same frequently made mistake pointed out by your correspondent S. Khochbin (*Nature* **405**, 14; 2000) in another recent article.

The reviewer includes the Persian mathematician and scholar Nasir al-Din al-Tusi among Arab mathematicians. Nasir al-Din al-Tusi did write in Arabic (as well as Persian), but this is like saying Sir Isaac Newton was not English, because he wrote in Latin!

Nasir al-Din al-Tusi was born in Tus, a city in the northeast part of Iran, in the province of Khorasan, quite far from any Arab populations at the time, or even now.

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