

Unravelling the links between forests and health

There is plenty of evidence to suggest that living in tropical forests can be hazardous for your health. Diseases such as HIV/AIDS, Ebola, river blindness and elephantiasis are closely associated with tropical forests, even if some – most notably HIV/AIDS – have now spread far beyond the forest edge.

However, forests also contribute a great deal to human welfare. Most obviously, many forest communities rely on them as a rich source of both food – nuts, berries, mushrooms, wild game and the like – and medicinal plants. The latter are important not just to people in developing countries who can't afford modern medicines – some 80 per cent of Africans use traditional herbal remedies – but for the developed world too: over half the prescribed drugs in the United States are derived from plant matter, much of it coming from forests.

A CIFOR Occasional Paper, *Forests and Human Health – Assessing the Evidence*, explores this highly complex subject. According to ecologist Douglas Sheil, this was an obvious subject for CIFOR to work on. “Much of our research concerns the well-being and livelihoods of forest people, and a key component of this is their health,” he explains. “We found that the research material on health and diseases in forest areas was scattered across a remarkable array of different disciplines, and there was no comprehensive overview.”

Some of the research had been published in health journals: some in anthropology journals. Bio-geographers and ecologists had dabbled with the subject, and so had many others. The studies tended to be very sharply focused, often looking at one particular disease in one particular community. They provided small and isolated pieces in a large jigsaw puzzle which remained full of gaps. The CIFOR synthesis was an attempt to fill in some of the black spaces.

It is impossible to make generalisations about the relationship between forests and health. While certain diseases are particularly prevalent in forest areas, others are closely linked with forest loss and ecological degradation. For example, dengue fever, Chagas disease, Lassa virus, rabies and the plague are all associated with deforestation, but even this statement needs qualification. The clearance of tropical forests to make way for agriculture has

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enabled people to enter areas that malaria had previously rendered uninhabitable in countries like Nepal and Panama.

Forests and Human Health also provides a detailed analysis of what we know about the contribution which forests make to medicine, and their importance to local cultures and the mental welfare of forest-dwelling populations. It also proposes measures which health professionals, resource managers, development planners and government agencies could take to improve the health of forest-dwelling communities.

Among other things, the authors suggest that resource managers should draw up plans to conserve medicinal plants – they are threatened by over-harvesting and habitat loss in many parts of the world – and work with health professionals and local people to ensure that families who depend on forest products, and especially the poor and those suffering from HIV/AIDS, have access to forest foods and medicines. Planners need to ensure that local people's subsistence needs are met when forests are subjected to land-use change, and the livelihoods of forest dwellers should be taken into consideration before forests are cleared to make way for other uses.

“I am convinced that we can't keep trying to come up with standardised policies that will apply to everywhere and everything,” explains anthropologist Carol Colfer, who spent many years working on public-health issues in Oman, the United States and Indonesian Borneo before she joined CIFOR. “When addressing health issues and forests, we need to be very site-specific and recognise that the policies which work in one area might well be inappropriate in others.”



Dental problems are common in forested areas – a man from Bengkulu, Sumatra, Indonesia.
Photo: Carol J. P. Colfer

“When hunter-gatherers are forced to settle, their health often deteriorates significantly.” Edmond Dounias

The hunter-gatherers’ dilemma

Governments often encourage – and sometimes coerce – hunter-gatherers to adopt a settled way of life, rather than continue roaming across vast areas of forest land, practising their traditional lifestyles. They frequently argue that this is in the hunter-gatherers’ best interest. However, research by Edmond Dounias and Alain Froment, published in a special issue of *Unasylva* on ‘Forests and human health’, suggests the opposite is often true.¹ “Our research shows that when hunter-gatherers are forced to settle, their health often deteriorates significantly,” explains Dounias, an ethno-ecologist seconded to CIFOR by the Institut de Recherche pour le Développement (IRD).

Nomadism used to be an efficient adaptive response to the high diversity of parasitic and infectious diseases found in tropical forests. By moving around in small groups, the various pygmy groups in Central Africa and the Punan hunter-gatherers of Kalimantan, Indonesia, have significantly reduced their exposure to a wide range of diseases. Their energetic lifestyles have also meant that they have high levels of fitness. The downside, of course, is that hunter-gatherers suffer high mortality, for example from hunting accidents and snake bites.

Dounias and Froment have compared the health of communities which still pursue the hunter-gatherer lifestyle with close relatives who have adopted a sedentary way of life. The differences are striking. The latter tend to suffer higher levels of infectious and sexually transmitted diseases. They are also more prone to alcoholism, and their diet and eating habits mean that they are physically less healthy than their nomadic relatives. This is the price they pay for being closer to the public services – education, formal health care, job opportunities and markets – which are generally not available to those who continue to live in the forests.

The research shows that it is still possible to lead a healthy life in the forest, and that pushing people out of the forests is not necessarily in their best interests. “We have a moral responsibility to inform hunter-gatherers about the risks to their cultural, nutritional and sanitary integrity if they decide to leave the forest for a settled lifestyle,” says Dounias. “But the choice should be theirs, and if they are to make the right choice, they need to be properly informed.”

¹ *Unasylva* No 224, Vol. 57, 2006/2, FAO, Rome. Edmond Dounias and Carol Colfer helped the editors plan the special issue on ‘Forests and human health.’



Delousing is common social behaviour among the Baka Pygmies of southern Cameroon, who temporarily abandon their permanent villages for seasonal camps in the forest; excessive parasites in the camp often provide motivation to move to another place.
Photo: Edmond Dounias