

Climate change II ■ Thomas E. Lovejoy

The great forest bargain

The time is at hand for a great global bargain about forests. While intact forests have long been valued as source of commodities and as great repositories of biodiversity today they have additional value as immense repositories of carbon.

Life on earth is largely driven by solar energy trapped by photosynthesis and is constructed of carbon. In the case of trees, much of the carbon is converted into wood.

The increase in greenhouse gases in the atmosphere and consequent climate change is a distortion of the basic carbon cycle. Part of the carbon dioxide comes from burning fossil fuels — essentially using the energy acquired by geologically ancient biology and releasing it in a relative instant.

The other part comes from modern photosynthesis through massive deforestation and mostly in the tropics. When CO₂ from deforestation is counted, Brazil and Indonesia are among the half dozen top emitters of greenhouse gases in the world.

Forests are already showing the effects of the climate change that has already taken place. The coniferous forests of the Northwest United States, British Columbia west of the Rocky Mountains and southern Alaska are suffering massive tree mortality. With warmer and longer summers the populations of the native pine bark beetle have grown enormously because they can now have one additional generation annually. Similar tree death is being observed in the coniferous forests of Scandinavia and Germany. There is risk of major forest fires from the standing dead trees. That would lead to more CO₂ in the atmosphere.

Currently 20 to 25 percent of the annual increase

of CO₂ in the atmosphere comes from deforestation. The carbon held in the current Amazon forest is equivalent to 15 years of the global annual increase from all sources. So it has long been clear that forest management — preventing deforestation, reforestation and tree plantations — has an important role in the efforts to address climate change.

For some time there has been hesitancy on the part of some to include natural forests in the developing carbon markets by permitting what is termed “avoided deforestation.” Although there are technical details to be resolved, the main obstacle has been a concern that in seeking to reduce emissions, industrialized nations would rush to use the forest part of the carbon cycle and postpone much needed changes in the energy sector.

However incompletely it may be recognized, the urgency of avoiding as much further climate change as is possible requires moving very aggressively on both forests and energy.

Happily there is growing recognition of the importance of forests in addressing climate change. Long opposed, Brazil has indicated a willingness to discuss avoided deforestation. Australia has an initiative with Indonesia.

In an interesting parallel to American states getting ahead of the national government on climate change, two Indonesian governors (Aceh and West Papua) and Governor Eduardo Braga of Amazonas in Brazil — a state 2.3 times the size of Texas — are energetically pursuing income from the ecosystem service of keep-

ing carbon in standing forests and out of the atmosphere. Tropical forests are conspicuous on the agenda of the Clinton Global Initiative meeting in New York that will take place after the UN General Assembly.

If the forest carbon part of the agenda is to work, the funds which flow as a consequence need to avoid the black hole of central government coffers.

To be sure, some funds should go to necessary functions such as monitoring and enforcement, but a significant share needs to be applied to the forest communities themselves.

Short-term economic considerations will continue to trump the longer term and global environmental imperative of addressing climate change unless there is financial reward for those who use the forest in ways that don't destroy it.

The need to include forests in combating rising greenhouse gas concentrations and climate change could not be more clear. With it will come all the benefits that have long been apparent — conservation of biodiversity and all its promise

for sustainable development, forest products and other ecosystem services such as the Amazon rain machine so critical for the Brazilian economy.

It's time to eschew bickering over details and move forward with a bold plan that benefits both forests and climate.

Thomas E. Lovejoy, a tropical biologist and conservation biologist, is president of the Heinz Center for Science, Economics and the Environment.

Tree death is occurring in the forests of North America, Scandinavia and Germany.