COMMENTARY

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LETTERS

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Mass Fruiting in Borneo: A Missed Opportunity



Dipterocarp tree seedlings. Many endangered Indonesian trees rarely produce seeds.

LARGE-SCALE RESTORATION OF tropical forest is increasingly recognized as a credible option for climate change mitigation and biodiversity conservation (1-3). To implement this strategy, we must collect and nurture vast numbers of tree seeds. Yet, in conservation priority areas such as Indonesiadiscussed by D. Normile in his News Focus story "Saving forests to save biodiversity" (10 September, p. 1278)—many tree species (such as the dipterocarps) rarely produce seeds (4). In 2010, we witnessed the first large mass fruiting event in Borneo since 1998, both in geographic extent and species

involved. Unfortunately, forestry departments, funding agencies, and most research institutes were unprepared for this rare opportunity. These seeds cannot be stored, even in state-of-theart seed banks (5). To contribute to the restoration efforts, they must be collected and planted immediately. We have much of the scientific and botanical knowledge required to achieve successful restoration [discussed in E. Pennisi's News Focus story "Tending the global garden" (10 September, p. 1274) and in (6)], but we lack the financial and infrastructural resources for seed collection, propagation, and restoration.

Substantial financial support must be dedicated to enable Southeast Asian countries to respond quickly to these critical but rare opportunities for conservation and restoration. We must prepare now to provide funding, planning, and infrastructure for the next major fruiting event. This may be the last opportunity to collect sufficient seeds from many endangered tree species for conservation and forest restoration.

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Asian Water Towers: More on Monsoons

W. W. IMMERZEEL ET AL. ("CLIMATE CHANGE will affect the Asian water towers," Reports, 11 June, p. 1382) overlooked two features of monsoon influence on the future of Asian water resources: Regional climate models disagree on whether monsoon precipitation will increase or decrease in the 21st century, and the resulting changes in precipitation seasonality will affect snowmelt characteristics.

Using data from five global general circulation models (GCMs), Immerzeel et al. conclude that a rise in precipitation will partly or entirely offset the reduction in glacial meltwater. Monsoon precipitation, however, is known to be difficult to capture in GCMs (1).

Because of their higher horizontal resolution, regional climate models can better represent the important effects on precipitation of moist air climbing over the mountains in the Himalaya region. Experiments in which the regional climate models based on the IPCC Special Report on Emissions Scenarios are used disagree on whether monsoon precipitation will rise or fall (2, 3). The reliability of an impact study built on the sole