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AAAS



5000 plant species in China are threatened with extinction.

As damage assessments proceed, SFA has established a disaster relief technology group and will hold an emergency meeting later this month to plan for restoration. Botanical gardens are doing their part, too. “We must work hard to save vegetation and lessen the extent of damage,” says Ren. “We want to find a way to help natural ecosystems

recover with minimal human disturbance.”

That is a tricky balancing act. At Nanling, managers are barring local residents from entering to remove downed timber. Although salvage logging could reduce wildfire risk, it could exacerbate erosion, further degrading ecosystems. The bulk of the restoration work is likely to focus on economic recovery: rehabilitation of plantations. The storm’s aftermath should also

spur long-term research on plant cold tolerance, says Li Jianqiang.

The immediate task is picking up the pieces after the worst winter in recent memory. “We cherish our endangered species,” says Li. But for some of the precious plants at Wuhan Botanical Garden and in southern China’s battered reserves, he says, “there is nothing we can do to save them.”

—RICHARD STONE

With reporting by Li Jiao in Beijing.

ANIMAL RIGHTS

Brazilian Scientists Battle Animal Experimentation Bans

Brazilian scientists are fighting a series of local attempts to ban animal experimentation that they say could cripple scientific research. At the top of their list: a controversial law passed 2 months ago by the city of Rio de Janeiro that prohibits all animal experiments at private companies. Researchers are hoping that a comprehensive federal bill addressing animal experimentation, which has been lingering in the Brazilian Congress for 12 years, will put a stop to such local bans.

The battle in Rio, a major biomedical research hub, has gone on for more than 2 years. In 2006, the city council passed an animal-welfare law, introduced by actor-turned-politician Cláudio Cavalcanti, that would have banned all animal experiments in the city. Mayor César Maia vetoed the bill. A second version, passed in September 2007, made an exception for universities and public organizations such as the Instituto Oswaldo Cruz (Fiocruz), a major vaccine producer. Maia vetoed that one, too. But the council overrode his veto on 26 December.

The law has not taken effect yet, and the mayor does not appear in a hurry to enforce it, says animal physiologist Luis Eugênio Mello of the Federal University in São Paulo, president of the Federation of Brazilian Societies of Experimental Biology. But if enforced, the ban could force several Rio biotech companies out of business. “It’s a crazy law,” says Eduardo Krieger, a former president of the Brazilian Academy of Sciences.

A comparable far-reaching bill was approved in December by Florianópolis, the capital of the southern state of Santa Catarina; that law was replaced by the city’s mayor in February with much less

stringent regulations. Similar legislative plans are afoot in other cities.

Brazil’s scientists contend that regulating animal research should not be a local issue and are arguing for a federal law. Indeed, such a bill was introduced in 1995 by Chamber of Deputies member Sérgio Arouca, who was once director of Fiocruz; it would ban animal experiments if other alternatives are available, require ethics committees to approve studies, and set up a national council to issue guidelines. But the bill never came to a vote, and Arouca died in 2003.

Researchers say “Arouca’s law” would protect them from a wave of municipal or state initiatives, and they have been lobbying hard to get the bill to a vote. **Animal-**

rights activists oppose it, however. Ethics panels, which already exist at the majority of research institutions, are dominated by scientists and rubber-stamp proposals, says George Guimarães, director of Ethical Vegetarianism, Animals Rights Defense and Society, a São Paulo-based group.

The researchers’ lobbying appears to have paid off, says Mello, with “support from left to right” in Congress. And recently, Brazil Presi-



No petty issue. Cláudio Cavalcanti is pushing for a ban on animal experiments to include the Instituto Oswaldo Cruz (top).

dent Luiz Inácio Lula da Silva, who has made advancing research a national priority, named Arouca’s law among his legislative priorities. Guimarães agrees that the federal bill is now likely to pass. But a legislative stalemate in the Congress, unrelated to the bill, could make it hard to pass any laws at all in 2008, Mello warns.

Cavalcanti says that he wants Rio’s mayor to enforce his law; he will also reintroduce the proposal for a total ban this year. Officials at Fiocruz, a big yellow fever vaccine producer, have warned that such a move could imperil routine quality testing of vaccines. But Cavalcanti says that he does not believe animal research can benefit human health. A single-issue politician, he has offered to become a guinea pig himself if it can help save animals. “This is my mission, my only reason for living,” he says.

Scientists should do more to counter the cruel image of animal studies that activists have promoted and explain why such work is necessary, says Walter Colli of the University of São Paulo. “We are guilty of not having done enough to influence public opinion,” he says. “The average citizen is confused.”

—MARTIN ENSERINK