

Everglades plan flawed, claim ecologists

[WASHINGTON] Leading ecologists have written to US interior secretary Bruce Babbitt, warning that an ambitious and politically prominent \$8 billion scheme to restore the Florida Everglades has "serious failings" and needs independent scientific review.

"These are deep, systemic problems, unlikely to be overcome by tinkering with the existing alternative," said the 28 January letter, signed by Stuart Pimm of the University of Tennessee, Paul Ehrlich of Stanford, E.O. Wilson of Harvard, Gary Meffe of the University of Florida, Peter Raven of the Missouri Botanical Garden and Gordon Orians of the University of Washington. Babbitt has agreed to hear the scientists' concerns.

The scheme calls for the US government and the state of Florida to share the costs of refurbishing the region's dykes and canals, digging storage reservoirs, restoring the ecosystem and providing fresh water and flood protection for the booming south Florida population. The restoration is expected to take at least 20 years.

The project aims to reverse the legacy of half a century of diversion and disturbance of the region's natural flow of water. Soil erosion is rife, the water table is dropping, flooding is frequent, rural and urban runoff have polluted local waters and habitat loss threatens biodiversity. The original Everglades have shrunk by half, while the south Florida population has grown from two million in 1948 to six million, and is estimated to reach 15 million by 2050.

But Pimm, who drafted the letter, and has worked extensively in the Everglades, questions the scheme's reliance on a computer model of Everglades hydrology. He claims the simulation is unrealistic, and that, for example, adjacent marsh areas with vastly different flooding periods do not occur in nature.



In the mire: the goals and methods of the Everglades restoration plan are under attack.

The letter also claims that repeated calls from National Park Service (NPS) and US Geological Survey scientists to explore natural solutions to managing the region's water rather than technological fixes have not been given sufficient consideration.

Government planners and environmentalists have responded angrily to the claims. "An apology is neither required or appropriate at this time," said Michael Davis, a deputy assistant secretary in the US Army, in a letter to Pimm last week. Davis, whose Corps of Engineers is co-directing the Everglades 'restudy', denied it was flawed: "I have the utmost confidence in the interdisciplinary, interagency team that developed the plan."

The letter is dismissed as "minority opinion" by David Guggenheim of the Conservancy of Southwest Florida, who chairs an

Everglades Coalition of more than 30 environmental groups. Mainstream environmentalists "all feel that this has been a good scientific process," he says.

This late questioning of the project's scientific integrity is "not appropriate," says Guggenheim. Scientists and engineers have worked for nearly 10 years on the restudy, and the plan is scheduled to reach Congress in July.

Pimm, speaking personally, alleges that the plan places water supplies above restoring the ecosystem. He cites NPS scientists who, in a critique of the restudy just before Christmas, said "There is insufficient evidence to substantiate the claims that [the plan] will result in recovery of a healthy, sustainable ecosystem. Rather, we find substantial, credible evidence to the contrary."

"This is pretty damning," says Pimm, arguing that the NPS has been ignored. Robert Johnson, a scientist with the Everglades National Park research centre that produced the report, says only that there are "some outstanding issues" with the restudy.

Environmental recovery is a key goal, say advocates of the restudy, but this will happen more slowly than other goals of the scheme. "It will take many years to restore this important ecosystem," wrote Davis.

The scientists' letter to Babbitt stresses the need for an independent outside review of the scheme. "The National Research Council [NRC] would be an obvious choice," they wrote. The scheme includes plans for scientific oversight, but not until the work is under way. "Peer review is an integral part of our implementation strategy," says Davis.

Guggenheim says additional peer review is unnecessary. He calls the restudy an "exceptionally open" project, and says scientists from government agencies and green groups have been looking over the restudy managers' shoulders throughout the planning phase. "We're not pushovers," he says of the Everglades Coalition; "we're very critical". The Sierra Club has broken ranks with other environmental groups, however, by echoing the call for outside peer review.

The South Florida Ecosystem Restoration Task Force, which includes representatives of various participating agencies and organizations, issued a statement last week saying it "welcomes scientific review of the restudy from all quarters at all times."

A formal NRC study could take years. The prospect of a delay worries project supporters, who have only recently got the political forces in southern Florida "all singing from the same page," says Guggenheim. He says a hold up may send "all the wrong signals. If we do anything to delay delivery of this [restudy] to Congress in July, it just might not happen."

Tony Reichhardt

Chandra slips, space shuttle runs a risk

[WASHINGTON] The launch date for the US\$2 billion Chandra X-Ray Observatory, originally scheduled for August 1998, was set back from May to July 1999 last week, the fourth postponement in just over a year.

Most previous delays had involved problems with the spacecraft, but the new delay has been caused by space shuttle missions being rescheduled to launch part of the International Space Station in May.

The delays to Chandra, third of the "Great Observatories", have cost NASA some \$50 million, but have not otherwise compromised the mission, say project scientists. The observatory, renamed to honour the late Indian-American astrophysicist Subrahmanyan

Chandrasekhar, will operate until 2004.

NASA had more bad news last week, from its Aerospace Safety Advisory Panel. The panel said in its annual report that personnel cuts in the agency and the shuttle's private operator, the United Space Alliance, have jeopardized safety to the point where NASA is "moving toward losing the core competencies needed to conduct the nation's space flight and aerospace programs in a safe and effective manner".

It advised the agency to ensure adequate budgets for its three field centres involved in human spaceflight. The report suggests that NASA's tactic of subsidizing science spending by cutting the shuttle programme may finally have come to breaking point. T. R.