SOUTH AFRICA

New Minister Picks Up the Baton

CAPE TOWN—For the past year, South Africa's first postapartheid government has been developing a comprehensive science policy. Now, just as the exercise is entering the home stretch, the man who has been instrumental in putting the new policy together has stepped down. Ben Ngubane, a member of the Inkatha Freedom Party (IFP) who headed the Ministry of Arts, Culture, Science, and Technology since the multiracial elections in 1994, resigned last month to join the KwaZulu/Natal provincial government. Ngubane's last official act as science minister was to present a white paper on science and technology, entitled "Preparing for the 21st Century," to a Cabinet committee that reviews new legislation.

The job of winning the backing of the full Cabinet—which is dominated by the rival African National Congress—will now fall to Lionel Mtshali, who took over as minister on 1 September. A former history teacher and minister of education and culture in the former KwaZulu homeland government, the 60-year-old Mtshali, also an IFP member, was elected to parliament in 1994. Mtshali is not widely known in the scientific community, and researchers are taking a wait-and-see attitude. "We look forward to seeing him perform," says Friedel Sellschop, deputy vice chancellor for research at the University of the Witwatersrand.

The white paper was drawn up through a consultative process over the past year, and the government is keeping details under wraps until it is formally approved by the Cabinet. The white paper aims to restructure South Africa's existing research system, which is somewhat centralized and elitist, into one more open to society and responsive to its needs. This will involve bolstering the research effort at historically black universities and setting up a national system of innovation to involve a wide range of interested organizations in the formation and implementation of science and technology policy. Scientists are looking forward to the release of the white paper and are generally positive about the anticipated changes.

Once the white paper is approved, Mtshali says one of his primary objectives will be to seek more funds for science. But he is not optimistic about securing a big increase in government funding at a time when public coffers are already sorely stretched by the need to provide better housing, education, and health care to South Africa's poor majority. "We will have a campaign to enlist support of nongovernmental institutions in particular," he says.

Mtshali has inherited several other major tasks from Ngubane. The first is the National Research and Technology Audit, a thorough "stocktaking" of the strengths and weaknesses of the science and technology system. And the Research and Technology Foresight exercise is intended to identify technologies most likely to contribute to economic development and improvement in the quality of life in the country. Mtshali, who will also have to oversee the completion of a white paper on arts and culture, will have his work cut out.

–Jonathan Spencer Jones

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LIFE SCIENCES

NASA Scales Back Science on Station

Publicly, NASA has been touting the international space station as an orbiting laboratory with an extensive and exciting research agenda. But privately, agency managers have been quietly reducing the amount of science that will be conducted aboard the facility in its early years. They have also asked Japan and Europe to consider building an expensive centrifuge that will form the cornerstone of biological research on the station. Both moves have upset U.S. researchers already unhappy with a recent decision to divert money from science to construction (*Science*, 9 August, p. 730).

The shift is necessary, say NASA managers, to keep the lab on schedule and within the annual $2.1 billion spending cap imposed by the White House and Congress to prevent the program from becoming a fiscal black hole. Andrew Allen, station program director, doesn't mince words: "There will be no research or research facilities without a space station. That is the harsh reality."

Agency officials decided to scale back the U.S. research program and seek outside help after technical problems with station components this year forced NASA to dip heavily into its reserves. Two other options—slipping the assembly schedule or asking Congress for more money—were rejected as politically unpalatable.

Under NASA's original plan, five space shuttle flights in coming years were to have been devoted primarily to ferrying scientific equipment to the station. Under the revamped plan approved last week by NASA Administrator Daniel Goldin, the 44,000 kilograms of payload set aside on the first two flights for science-related activities in 1999 would be cut to between 11,000 and 22,000 kilograms, says Mark Uhran, a senior program engineer in NASA's life science and microgravity office. No decision has been made about payloads for the remaining three flights.

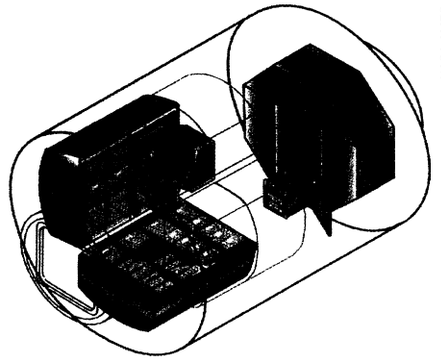
It could have been much worse. Johnson Space Center managers lobbied to abandon any scientific component for those first two flights, but Goldin decided that course would cause an unacceptable delay in the research. "We will scale things back initially, then pick it up later on," Allen says. The agency hopes a team of outside researchers will come up with a detailed new science plan by mid-October, says Uhran.

Nevertheless, researchers are worried that their needs may be ignored. "This means that the utilization of the station will be minimal for several years," says Mary Jane Osborn, a University of Connecticut microbiologist who heads a National Research Council panel on space biology. "How do we keep the community on board if we sit on our thumbs for 3 years?"

Osborn is also concerned about separate NASA efforts to persuade Japan to build the station centrifuge and have Europe build the module that will house it. This shift will likely delay the $500 million facility now slated for a 2002 launch, she warns. John Givens, who manages the centrifuge effort at Ames Research Center in Mountain View, California, shares Osborn's worry. He says Japan's lack of experience in space centrifuge design could well lead to delays. Allen, however, insists that the centrifuge's schedule would not change, and that Japanese and European participation would ease some of the immediate budget pressure.

Japanese and European officials are expected to let NASA know their position by the end of the month. In the meantime, it is clear that budgetary and scheduling pressures have made science an unavoidable target. Says Allen: "I've got a space station to build."

–Andrew Lawler



NASA AMES

Up for grabs. NASA wants partners to build the centrifuge for the space station.