

Croatia: Aiming High



Was it a scheduling error that put Croatia on a panel yesterday afternoon with scientific powerhouses USA and Britain for a session on what governments can do to spur innovation and compete globally? It seems that way at first -- until Dragan Primorac, Croatia's science chief, begins to unveil his grand strategy. As he flips through slide after slide dense with statistics, it's obvious that Croatia is punching above its economic weight in ambition. And Primorac--minister for science, education, and sports since 2003 (seen at left in the red shirt, training with Croatia's national football team)--seems to enjoy the challenge. Scientists improve by measuring themselves against the best, he says, and he intends to do exactly that...

In the past 5 years, according to Primorac, the number of students graduating with higher education degrees (university or polytechnic) in Croatia has increased by 34,000. Educational standards are rising on several fronts: All students now are required to learn two languages, for example. The budget for science and technology has grown since 2003 by 54%--"better than we did for the previous 18 years," says the geneticist and forensic scientist. Roughly \$500 million also went into university infrastructure. The government has pledged to raise teaching salaries 61% over a multiyear period. A "brain gain" program--giving jobs, lab space, staff, and subsidized housing to homecoming scientists--has lured back 65 Croatian researchers. But there are a couple of problems, Primorac says--one related to expectations and the other to quality control.

But years of heavy spending to build up the scientific base produces great expectations. "People are unhappy -- the prime minister is unhappy," Primorac says, because there are few tangible results. "You still have universities with rooms that are overcrowded, a lack of professors." He's trying to explain to everyone that it will take 5 to 10 more years for investments to bring widespread changes. Despite public impatience, he claims that his ministry is "one of the most popular," with strong support in the media. The next, "very painful" test will be to turn the focus from quantity to quality as the system undergoes performance evaluation.

Croatia has invited 15 top scientists from abroad to sit on a commission to review the country's scientific institutions. At the same time a national center has begun to evaluate universities and their professors on "outcomes of education," including what happens to their students. The minister acknowledges that his authority is limited; he says he cannot interfere with the "autonomy" of academic institutions. But he gives the impression that he might like to do so. A student from the University of Zagreb in the audience rises with a question that turns into a critique of his department and its poor management of the computing system it controls. "Give me the names," says Primorac. "We paid for the computer; I would be happy to find out how they are using it."

--Eliot Marshal, Science's International News Editor