



## Don't distort policy in the name of national pride

Dyna Rochmyaningsih offers a lesson from Indonesia on what can go wrong when governments use research to make a country look good.

Countries have long tried to capitalize on scientific achievements by celebrating them as a source of national pride. From the state sponsorship of polar expeditions a century ago to the statements earlier this year from the Iranian government that its nuclear programme was developed to gain prestige, politicians recognize the powerful and popular pull of success in research. In a 2002 survey, for example, more people in the United States said that they were “very proud” of the nation’s achievements in science and technology than in any other field, including sport, economics, and art and literature. And in 2013, the BBC devoted a series of television documentaries to the “Wonder of British science”.

For a developing nation such as Indonesia, advancing its science and technology is therefore a convenient way for the government to encourage its people to feel better about their country and its place in the world. But what happens when nationalism drives, rather than merely celebrates, science? The results from Indonesia suggest that priorities can become skewed and rigorous scientific assessment ignored. This is a valuable lesson for all countries.

The development of science and technology in Indonesia has accelerated in recent years, with help from US scientific diplomacy in the Islamic world. In May, the Indonesian Academy of Sciences, with support from the United States, launched a fund offering grants to young researchers. Collaborating with Australia, the academy has also set a series of challenges for Indonesian scientists to address, including disaster mitigation and strengthening community resilience.

Such international support for Indonesian science seems stable — the partnership with Australia survived the political row between the two countries in April over Indonesia’s execution of Australian drug smugglers, for example. Yet although it is true that science has no boundaries, strong and original research by a country such as Indonesia is a crucial platform on which to build its economic development. Indonesia’s scientists seem capable: most of the country’s patent applications, for example, come from scientists in local universities. But in what direction does the Indonesian government want them to head?

Two high-profile projects suggest that the officials who steer our national science policy are favouring questionable research that is likely to bring short-term headlines and ‘national pride’, rather than solid science that will result in true, long-term societal benefit.

The first of these projects is based on the claim that ancient Indonesia could have been home to Earth’s oldest civilization. Geological patterns discovered during excavation of the Gunung Padang volcanic site in West Java have been used to push the idea that an ancient pyramid is buried there that would

predate the historic ruins of ancient Egypt by thousands of years. Many Indonesian people love the project and its extraordinary claims, and the work has received backing from the government. The Indonesian president visited the site last year to proclaim it the cradle of civilization, and military forces have been deployed to assist work there.

Ironically, Danny Hilman Natawidjaja — the lead scientist on the project and a geologist at the Indonesian Institute of Sciences — was originally studying evidence of past natural disasters in the region, as part of research to understand future hazards, when he became distracted by the pyramid idea. Nationalism has distorted priorities. Studying disasters is more important than searching for a buried pyramid.

The second project concerns a controversial electrical cancer therapy, developed and promoted by Warsito Taruno at CTECH Laboratories in Tangerang. Devices based on static electricity, he claims, can locate and then target cancer cells to stop them dividing. Indonesian people with cancer are flocking to his clinic for the treatment.

When the Indonesian Radiation Oncology Society and the Indonesian Society of Surgical Oncology sent a letter to the government in 2013 asking it to close Warsito’s clinic — on the grounds that the device had not been clinically trialled in Indonesian hospitals — the government again played the national-pride card. The Ministry of Health said that Warsito’s research is innovation from a “child of the nation” and should be supported. And last year, the Ministry of Legal and Human Rights honoured him as our country’s best inventor.

If the government is serious about building a future for Indonesia on the basis of devices such as Warsito’s, it should carry out further human testing and double-blind clinical trials. In its response to the oncology associations’ letter, it said that it was willing to do this. More broadly, no government should base scientific development on what it thinks makes its country look good. Our government does support solid research that could help Indonesia to flourish using its national resources, such as projects to investigate the medicinal properties of native plants. But because these projects receive little public attention, officials do not view such efforts as a priority.

Fixing the problem will not be easy. Perhaps a science adviser to the president would help. Or science policy might be centralized in a single ministry. The Indonesian Academy of Sciences could play a more active part, by speaking out to promote high-quality science. And most of all, the government must realize that science is more than a source of national pride. Its ultimate goal is not to put a smile on people’s faces. It is to help them to live better lives. ■

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