

## Case of bogus science

Wednesday 24 November 2010, by [HOODBHOY Pervez](#) (Date first published: 23 November 2010).

COMSTECH is the Organisation of Islamic Countries' highest scientific body. It has received millions of dollars from OIC countries, including Pakistan.

Comstech's magnificent headquarters are located on Constitution Avenue in Islamabad. It has been headed by Dr Atta-ur-Rahman since 1996. Although its performance has been consistently mediocre, the organisation has now descended to an all-time low.

Recently Dr Rahman published an eye-popping article entitled HAARP (Dawn, Oct 17). The article claims that a physics research project, based in Alaska, may have been used by the US to trigger earthquakes globally, and could also have caused the catastrophic floods in Pakistan. Dr Rahman concludes with a chilling question: "Is the HAARP then, a harmless research tool — or a weapon of mass destruction far more lethal than nuclear weapons? We may never know."

Given Dr Rahman's prominent place in Pakistani science, and that he is fellow of the Royal Society, one must consider seriously his claim that HAARP can cause earthquakes and floods. But even the briefest examination makes clear his claims make no scientific sense.

HAARP stands for High Frequency Active Auroral Research Programme. Its website states it is a research programme run by the University of Alaska in collaboration with various US colleges and universities. If HAARP is a secret military project conceived by evil and diabolical minds, it is hard to see why visitors, including foreign nationals, are said to be allowed on site. The website says that the last open house was on July 17, 2010.

At least on the face of things, HAARP does not have the trappings of an American secret weapons facility. (Google Earth, which I used, blacks these out.)

Readers will see a field of antennas, as well as some cars and two ordinary looking buildings. No security barriers are visible. This does not appear to be a classified project.

But, of course, appearances can be deceptive. So let us simply use common sense and physics. Assume therefore that the power of the transmitters is many times that declared on the website (3.6MW). This may mean HAARP could potentially disrupt radio communications during war, or blind incoming missiles. But science cannot accept Dr Rahman's claim that "It (HAARP) may also affect plate tectonics causing earthquakes, floods through torrential rains and trigger tsunamis."

Does the good doctor believe in magic and demons? How else can massive tectonic plates be moved by radio waves? Will HAARP tickle a sleeping subterranean monster that awakes and sets off earthquakes? This kind of thinking was what irate and ignorant village mullahs used after the 2005 Pakistani earthquake. They blamed cable television, after which followers smashed thousands of television sets.

Weather change simply cannot be caused by HAARP's radio waves. The effects of a puny 3.6MW radio transmitter on the ionosphere can only be detected with sensitive instruments. Even these are almost completely washed out by a constant stream of charged particles from the sun that hit the earth during daytime. To see HAARP's effects would be like trying to see a candle a mile away in

blazing sunlight.

Today, even the most powerful lasers and radios are millions of times weaker than needed to heat sizeable portions of the ionosphere. (Of course, producing hotspots in tiny volumes anywhere is not a problem, but these have zero effect on the weather or earthquakes.) Perhaps in some future century a laser might be able to do this job.

Dr Rahman says he is uncertain if HAARP could equal a nuclear weapon or perhaps be even more destructive. But if it is actually the super-weapon that he alleges, then the laws of physics will have to be overturned. Physicists will have the sad task of unlearning all that they know and burning their useless books. With a heavy heart, I shall return all my physics degrees.

Scientists sometimes disagree — this is how scientific disputes are resolved. But it is worth asking if at least some genuine scientists support Dr Rahman's claims. He provides no examples. Instead, he quotes President Hugo Chavez of Venezuela, who accused the US of causing the Haiti earthquake. While I admire Chavez for standing up to political bullying by the US, I am not sure he knows anything about plate tectonics. In fact, his claim caused seismologists to crack up with laughter.

Dr Rahman also quotes a 1999 committee of the European Union Parliament that called for HAARP to be examined by an international independent body. I do not know if any of the committee members were scientists. But 11 years later, the EU has not called for further investigation, nor alleged that HAARP has caused natural disasters.

The good doctor enthusiastically endorses the statements of Dr Nick Begich, one of HAARP's most vocal critics, and refers to him reverentially as a scientist. But Begich's website says that he obtained a doctorate in traditional medicine from The Open International University for Complementary Medicines in 1994. In other words Begich is not a scientist, but a homeopath who obtained a mail order degree.

Yet another quoted "authority" is the arch conspiracy theorist, Michel Chossudovsky, a retired professor of economics in Ottawa. In Dr Rahman's pantheon of 'experts', none has published a scientific paper in a reputable science journal that demonstrates a connection between ionospheric physics and any weather or subterranean phenomenon. In short, Dr Rahman's claims about HAARP are based on pseudo-science promoted by conspiracy theorists who blame America for all grief in the world.

Once science loses its objectivity and becomes enslaved to any kind of ideology or political opinion, it becomes useless.

Quack science does not just cost money. It also confuses people, engages them in bizarre conspiracy theories, and decreases society's collective ability to make sensible decisions. One must therefore seriously question whether a pseudoscience organisation like Comstech deserves lavish funding from poor Pakistanis. We have better things to spend our money on. As for the world of science: it will not even notice Comstech's demise.

**Pervez Hoodbhoy**

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