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Dear Public Servants,

Please consider the following information in your deliberations concerning the recent unprecedented flood events in South-East Queensland. Please review the information below and act as is your duty and obligations under your oaths of office. Please note all my FOI requests in this matter have been denied. Consequently, it is hoped that this independent and transparent Commission will act in good faith and investigate further.

As a professional geographer/geo-spatial analyst, I am aware of the very unusual hydrology related to this event. After some initial research I have come across very interesting material relating to the Queensland government's funding and application of weather modification technologies. This Commission should be aware that Australia is a signatory nation to the 1978 UN Treaty banning environmental modification systems - The UN Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques.

**A January 2008 Courier Mail article reports:**

"Showers have fallen after the first two flights of Queensland's cloud seeding trial. Paul Brady, managing director of MIPD, the company doing the seeding, said yesterday that the project would be a success.

<http://www.mipd.com.au/>

"We believe it works but the scientific level of proof is different to ours,' Mr Brady said."

The article quotes Queensland Sustainability Minister Andrew McNamara who was planning to spend \$7.6 million over four years to test cloud-seeding:

"Successful cloud seeding won't solve southeast Queensland's water crisis on its own but would be part of an overall package, including recycling, more efficient water use, desalination and new storage facilities..."

"This project will focus on the Wivenhoe and Somerset dam catchments."

The article states, "Seeding would not end droughts but could boost inflows to dams." That would be the same Wivenhoe dam, that thanks to the inflow of rain reached nearly 200% of capacity. It required emergency measures to drain off the massive

amounts of water. Drainage that may have increased the flood damage.

Based on these reports and a document from the Victorian Government it seems cloud seeding has been taking place in Queensland since 2007. The four-year trial isn't due to end until this year.

The report states:

"The Queensland Government is undertaking a four-year cloud-seeding project in South East Queensland which commenced in November 2007.

"The aim of the project is to find out if cloud seeding is a viable way of enhancing the rainfall over South East Queensland's dam catchments. The intention is to determine whether it is worthwhile investing in cloud seeding in the long term to increase water storage. It is recognised that cloud seeding is not a means for breaking the drought."

### **Friday, 23 November 2007 Anna Salleh ABC**

Rainmaking technology funded by the Australian government has already been given the thumbs down by international scientists, says an adviser to the World Meteorological Organization.

But proponents of the technology say the criticism is unjust.

Dr Roelof Bruintjes, a US-based researcher who advises the World Meteorological Organization (WMO) on rainfall enhancement, was commenting on technology soon to be tested in Queensland by the Australian Rain Corporation.

<http://www.australianrain.com.au/index.html>

The Environment Minister Malcolm Turnbull has announced the grant to the Australian Rain Corporation, a company part-owned by Rupert Murdoch's nephew, Matt Handbury.

But researchers commissioned by the National Water Commission to investigate the technology have questioned whether the \$10-million grant should have been awarded now, saying a more careful evaluation of the science is needed first.

Mr Handbury himself agrees the science is in no way conclusive, but denies his family connections have helped him secure the federal money.

Tanya Nolan has our report.

TANYA NOLAN: It's a technique developed in Russia in the last decade, and it involves sending electrical charges into the atmosphere to make clouds and ultimately rain.

But the problem with it, says Neville Fletcher, a visiting fellow at ANU and emeritus professor of physics at the University of New England, is that it hasn't ever been examined in a thorough scientific way, nor has it been peer reviewed.

NEVILLE FLETCHER: I haven't seen yet enough evidence to say that I'm persuaded that it's going to work. The measurements in Queensland showed that there was more rain in the catchment area than there usually was when the equipment was running. But there was a lot more rain in that part of Queensland at that time as well. So it's a little bit hard to say. It didn't show that the equipment worked, but there was nothing to indicate that it didn't work. So it was a possibility.

The report warned the commission not to go ahead with any trials of the technology until the science behind it could be more thoroughly tested. But it did say that if it could be done "at no great expense" a trial could be "worthwhile".

The report was produced after a small-scale trial of the technology was conducted in May in conjunction with the University of Queensland, which concluded there was an increase in rainfall at the time and recommended more scientific testing be done.

Environment Minister Malcolm Turnbull has now awarded \$10-million to the Australian Rain Corporation, which owns the technology, to conduct a full scientific trial of it.

The Sydney-based company, which was recently allocated A\$10 million from the Australian Government Water Fund, hopes to use forthcoming trials to show its technology can bring rain.

The technology is being tested to see if it can make new rain clouds from blue skies by generating ions in the atmosphere.

This is very different from existing rainmaking technology, which relies on seeding existing clouds, and has been carried out for decades in Tasmania and the Snowy Mountains.

Some Australian experts have already publicly said they are sceptical of the new ionisation technology and Brountjes agrees.

"I don't think it's money well spent to be honest with you. As far as I'm concerned it's physically not possible," he says.

"Nobody can make or chase away a cloud. Nobody can make rain out of nothing."

Making clouds from scratch?

Scientists involved in testing the Australian Rain Corporation technology, including Professor Jürg Keller of the University of Queensland, say the ionisation system uses a ground-based device to attract water molecules.

These then condense, generating heat that, in turn, triggers an up-draft of the kind that occurs when clouds form naturally.

But Bruintjes, a cloud physicist at the National Center for Atmospheric Research in Boulder Colorado, says WMO experts have already warned against using such ionisation techniques because they are not based on accepted scientific principles. Bruintjes says while it's possible to ionise atmospheric particles, it is not possible to modify the thermodynamic structure of the atmosphere and so there is no current credible theory to support the idea.

He also says evaluations of the technology in the United Arab Emirates and Mexico have shown it is not useful in enhancing rainfall.

Bruintjes does not understand why Australia has embraced the technology.

"Any country that is in a severe drought is desperate to use any type of technology and maybe this is what has happened in Australia," he says.

If it works, hang the mechanism Queanbeyan-based sustainability consultant Andrew Campbell, is advising the Australian Rain Corporation on the Queensland trials.

He says it is prudent to investigate whether the technology works in Australian conditions, even if scientists don't understand how it works.

"From a water policy perspective, the much more important question is whether or not this technology enhances rainfall," says Campbell, former chief executive officer of Land and Water Australia.

"If it does we can analyse the mechanisms at our leisure. If it doesn't then that's a completely academic exercise."

Campbell says he is not aware of any prior evaluation of the technology Australian Rain Corporation will be trialling.

But Bruintjes is adamant the technology is the same Russian-developed system that has been promoted over many years by various companies around the world, and which the WMO has warned against.

Competitors?

Bruintjes is currently in Australia advising the Queensland government on cloud seeding.

Campbell says criticism of the competing ionisation technology is not justified.

"It's understandable that people involved in cloud seeding are concerned about a competitive technology," he says.

"But until it is properly scientifically evaluated, claims either for or against aren't credible."

Bruintjes agrees it's urgent to investigate rain enhancement technologies but says there are better ways to spend the money.

He says one problem is that it's very difficult to determine the success of any rain enhancement technology because of natural variation in rainfall.

Bruintjes says it's important to develop a better understanding of how rain forms in clouds, and how technologies with known physical mechanisms can manipulate this. "We need to focus on understanding rather than just going out blindly testing technology we don't understand," he says.

### **Thai rain making comes to Qld**

Sydney Morning Herald 08/08/2010

A rain-making method developed by Thai king Bhumipol Adulyadej is set to aid Queensland in battles with drought after an agreement between the state government and the Thai royal household.

The Queensland government's access to the rain-making technology, developed by King Bhumipol over the past 30 years, came a year after the state approached the royal household last year.

As a result, Queensland is set to be the first major region outside Thailand where the rain-making technology will be put into full effect.

In the past, Australia had joined other nations requesting information exchange and technology on the technique.

But Soothiporn Jitmittraparp, secretary general of the National Research Council of Thailand, said similarities in topography in Thailand and Queensland would be beneficial to the success of the project.

"The climate and geology of Queensland drought area is very similar to some parts of Thailand. So we're quite sure this technology can be used effectively in Queensland," Soothiporn told AAP.

The technique largely relies on cloud seeding generally undertaken using chemicals that promote the formation of water droplets within the cloud formations.

The chemical cloud seeding in turn creates clouds with differing temperatures at different altitudes.

There are several stages in the process, with sodium chloride used in the final stage to trigger rain.

"If that kind of cloud is set up in a very good condition, then the cloud will condense into water and the rain will begin falling," Soothiporn said.

In Thailand, the cloud-seeding method has been applied in the largely drought-affected north-east of the country as well as boosting water volume in dams and reservoirs and aiding reforestation programs.

Mr Soothiporn said the agreement is also set to boost bilateral cooperation between Thailand and Australia in areas of meteorology and weather programs.

Talks between the state government and the Thai royal household began in 2009 but an agreement was reached only in June.

It allows for exchange of scientists to study the rain-making methods. The technique was recognised in 2005 and covered by patents in 30 European countries.

Reports said Queensland Premier Anna Bligh had recently forwarded a letter to King Bhumipol, now 83, acknowledging the assistance for access to the techniques.

Queensland initially made the request for assistance when the state was more than 35 per cent drought affected in 2009. But heavy rains across the region over the first half of this year has left less than two per cent of coverage still affected.

And then there is this interesting fact - 2008 Feasibility Study for the Augmentation of Rain & Air Chemistry Monitoring carried out by Weather Modification Inc. on behalf of the Qld EPA. WMI kindly supplied the 'Instrumented Aircraft and Crew for Cloud Seeding'.

<http://www.weathermodification.com/projects.php?id=4>

I have also been informed that the Queensland govt has been trying to sell water to the Japanese. Originally, the Japanese were going to buy water from Equador until the Queensland govt came into a price war against Equador and told the Japanese that "we can do a better deal". When the floods happened, the Japanese had pulled out of the QLD deal and went back to Equador because they undercut QLD's deal. The most likely scenerio is that Bligh had given the 'go ahead' to implement the above outlined weather modification technologies so there'd be a copious amount of water to sell to the Japanese. The dam floodgates at Wivenhoe were opened because the dam wall integrity would be compromised and consequently flooded peoples homes and businesses all because Bligh could not sell the water; they had to let it go.

Queenslanders, and recently Victorians, who had insurance cover found out that the Insurance companies would not pay up because they called it "not a natural disaster" because they KNEW the govt initiated the disaster. I remember the news media had aired a lady in Victoria stunned to find her insurance company would not pay up as it was, quote, "not a natural disaster".

This scenario can be confirmed with documents from the Commodity Futures Trading Commission in Washington discussing "events contracts". This can be supplied on request.

Thanks for your time and consideration in these important matters.