Dear Blake,

I received this email from [redacted] as she was seeking an independent view on ARPANSA's official response. I would like to respond to some of your points below especially as you have avoided answering most of them.

Firstly, I think it is disingenuous to say that ARPANSA shares our concern about health and wellbeing because it does not actively investigate any complaints made by affected people – it simply records statistics and provides template responses that are devoid of any morality and ethics. ARPANSA also lacks scientists who actively perform health based biological research in the field of chronic long term EMR exposures to humans or the environment. As far as I know, confirmed by Dr Stephen Solomon at the last EMERG meeting to me, ARPANSA has no staff that have medical backgrounds and so disqualifies itself as expert body on Radio Frequency and human health.

I would also challenge your claim that "experts" reviewed the scientific literature between 2000 – 2012 because none of those involved in this review process have medical sciences backgrounds and so therefore are not qualified to make any informed comment on what the health effects may be to known biological effects attributed to long term microwave exposure operating below the basic restrictions.

Professor Rodney Croft is a psychologist who is given far too much credit as an expert than he deserves. I do however applaud him for being honest enough in his contribution to the Technical report where he said he did not have time to review the research papers provided by ARPANSA. Therefore, we have to take it that his portion of the document is based on his personal opinion which is biased towards Electromagnetic Hypersensitivity being a psychosomatic problem. This of course is in opposition to what scientists with appropriate qualifications in Biochemistry and Medical Sciences are finding "Microwave frequency electromagnetic fields (EMFs) produce widespread neuropsychiatric effects including depression." http://www.ncbi.nlm.nih.gov/pubmed/26300312?dopt=Abstract

Professor Andrew Wood, another psychologist who also happens to have credentials in biophysics and is therefore perhaps the most qualified in the group to contribute to the "expert report". Of course he does not have a background in medical sciences, indicated to me at the Wollongong Science and Wireless workshop (ICNIRP and WHO) in 2014 that he did not have time to do a thorough review of the papers provided to him. Andrew also has a very close relationship with the industry as detailed in his Swinburne resume - at least he discloses his relationship unlike other contributor(s). I have reviewed some of the research that Andrew has performed in the past and the problem I have is that his focus was mainly on one off short term exposures or a number of short term exposure over a limited number of days. It is pretty clear that the current science shows very limited short term exposure effects are likely to be transitory (disappear when the signal ceases) and so the chances for long term health impacts under these conditions are negligible. An analogy would be to smoke one cigarette and look for health outcomes or 1 cigarette every day for a single week, it is not likely to show anything. However, research is showing that biological effects are occurring with potential health consequences to be expected (neurological, immunological, endocrine changes as well as cancer) if exposures are chronic and sustained over a long term (over many years). There are literally many thousands of papers showing effects that are noteworthy and in some cases alarming.

In regards to the actual technical report, it suffers the same limitations as what ARPANSA is applying to the Bioinitiative report in terms of its value. That is the said report is an opinion by

the authors that may not be representative of what many international scientist believe, despite likeminded organisations (ARPANSA, ICNIRP and WHO) perpetuating that there is agreement (general consensus), a false claim, this is backed up by the compelling fact that over 190 international scientists from 38 countries recently have signed a letter to the UN and head of the WHO on RF and safety guidelines http://www.ibtimes.com/international-scientists-warn-against-em-radiation-emitted-electronic-gadgets-1920862. And like the Bioinitiative report, the technical report has not been independently peer reviewed.

Below is what I have previously sent to Dr Karipidis after the last EMERG meeting and should be available on Govdex.

“When it comes to assessment of scientific evidence then I am assuming you are referring to the so called expert report (TRS 164) that supposedly saw experts review over 1300 publications. Where ARPANSA chose the studies to be reviewed, the basis for inclusion/exclusion was not mentioned, a full list of reviewed publications not provided so we have no idea what was in and what was out and so selection bias cannot be ruled out. Another major issue is the experts had only 3 months to review the materials and also perform their normal day to day jobs. Where one expert (Croft) was honest enough to say he did not have the time to review the materials related to his topic and so we can only assume his contribution is based on his opinions and experiences. Where another scientist personally informed me he had insufficient time to review all the materials and was only given abstracts to review. Without the full study details it is not possible to determine the quality of the test methodology or the reported outcomes. The other big question that cannot be easily satisfied without reviewing each expert’s past history is whether or not the expert reviewers are truly neutral or whether they are biased in their opinions? Are all studies scrutinised with the same level of vigour and intensity? Going by media statements by some of Australia’s scientists we get a clear view suggesting that bias is present. Some of them have also enjoyed a close relationship with the telecommunications industry. It is also concerning that the IN VITRO summary results show for a number of topics, a disproportionate number of effects vs no effects in favour of no effect and is not representative of what is typically found in research. An example includes Genotoxic events where the expert report suggests 16 studies showed an effect and 32 did not (giving the appearance that no effect is more prominent) which is in opposition to this “Abstract 101 publications are exploited which have studied Genotoxicity of radiofrequency electromagnetic fields (RF-EMF) in vivo and in vitro. Of these 49 report a genotoxic effect and 42 do not. In addition, 8 studies failed to detect an influence on the genetic material, but showed that RF-EMF enhanced the genotoxic action of other chemical or physical agents.” Source: Division of Occupational Medicine, Medical University of Vienna, Waehringer Guertel 18-20, Berggasse 4/33, 1090 Vienna, Austria. Author: Ruediger HW.

Perhaps this is a case where ARPANSA appears to have influenced the outcome with what appears to be possible study selection bias. It is also concerning that there are more studies showing membrane effects (17 effect vs 4 no effect studies) and direct effect on proteins (15 effect vs 1 no effect) but because these cannot be translated to health effects with certainty they are relegated as being unimportant. It is also my opinion that the conclusion does not match what the data is presenting. It would appear that the effects are being disregarded or downplayed. I find this baffling especially as some of effects detailed can definitely be interpreted as being linked to health and well-being. The expert report fails to provide any details as to the funding sources for the studies selected for review so we do not have any visibility of how the effects vs no effect studies align with the funding source. It would appear that the report was scripted to support the current RF Standard.”

I have been collecting studies since 2012 that demonstrate biological effects (attached) from microwaves operating below basic restrictions, some are repeat studies and some of these effects can definitely result in impacts to health. Of course what these studies are finding are not new and have been known for at least 50 years. Oxidative stress, DNA damage, alter gene expression (including downregulating genes that control cancers), alter protein and enzyme function, Calcium flux changes, altered Glucose metabolism, morphological changes, cognitive performance issues, sperm and cellular damage. These studies falsify the claim by ARPANSA that Australia's RF Standard "a high degree of protection against the known health effects of RF EMR" although the response others often get from ARPANSA also includes "for people of all health statuses". Of course ARPANSA's claim is not in alignment with ICNIRP, whose guidelines our RF standards are based on. ICNIRP and WHO says RF Guidelines are for the general population and that there are potentially vulnerable people who are sensitive to these frequencies and so may not be fully protected (includes patients, children, pregnant women, elderly, sick and those who have been concomitantly impacted by chemicals, ionizing radiation etc.) ICNIRP has indicated that it plans to address the issue of vulnerable people and chronic exposures in an updated guideline but this is some years away.

I think it would serve ARPANSA well by putting public health ahead of vested interests and look into claims made by people that they are being impacted by microwave transmitters instead of using the current RF cooking Standard as a "defensive wall" against a proper and transparent investigation. To ignore the evidence that is right in front of you and to continue claiming that there are no known health problems associated with exposure below basic restriction will attract legal liability in the near future. People are getting fed up with the lies and misinformation. It is my intention to raise this issue at the next EMERG meeting.

Regards,

Steve Weller