



ELECTROMAGNETIC RADIATION RESEARCH
FOUNDATION OF SOUTH AFRICA



13th January 2012

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Dear Ms Lesufi

RE : Submission on Policy Directions drafted in terms of Section 3 (2) of the electronic communications act 2005 (Act no 36 of 2005)- Policy directions to ICASA on Exploitation of the Digital Dividend Spectrum and Radio Frequency Spectrum for Electronic Communication Services / Environmental & Health Concerns

Further to the proposed Policy Directions we wish to strongly bring to your attention the following points, some of which have already been raised in two previous letters addressed to the Ministers of Health, Communications and Environment. Ref: Letter on EIA dated 8th March 2011 and Letter dated 17th October 2011.

We wish to object to the approval of the Policy directions on Exploitation of the Digital Dividend Spectrum & Radio Frequency Spectrum for Electronic Communication Services in terms of Sec. 3(2) of the Electronic Communications Act 2005 (Act No 36 of 2005) as proposed in Gov. Gazette of 14/12/2011, Notice No 898 of 2011 without prior assessments done on what impact has been noted on people's health and the environment during the trial periods of LTE and what the latest international advice is coming to the fore.

This applies to other technologies that are planned including Digital TV.

Members of the South African public being affected by EMFs has increased dramatically as new frequencies and service providers are licensed and the roll-out of technologies that are deemed unsafe or prohibited by other countries continues in South Africa.

In our previous letter we noted how many symptoms had increased in 2011 and ICASA was unable to confirm what had been rolled out or what was being tested.

The complaints included and have been noted further as:

- Severe headaches or pressure in the head
- A pressure in the ears
- Pins and needles in feet and up legs
- Shooting pain in the top of the head / burning itchy head
- On-going gastroenteritis - **severe and widespread and repetitive**. (Certain bacteria have been shown to be activated by electromagnetic fields including E.Coli bacteria)
- Severe shooting pains up neck and shoulders or in legs
- Chronic fatigue
- Kidney pains
- Stomach pains – noted in children more as shooting pains just below the sternum and stomach swelling
- Adults have noted indigestion type pains with constant burping
- Blurry vision and
- Burning itchy eyes
- Burning skin
- Ovary and gonad pains
- Severe sinusitis and allergies including nosebleeds

- Immune system breakdown
- Seizures
- Breathing problems – a pressure or pushing down on the chest
- Sleep disruption
- Rheumatoid type conditions – joints swelling or sore. (elbows, knees, hands)
- Unexplained depression
- Severe tinnitus especially at night
- Sudden hair loss and dehydrated skin
- Heart palpitations
- Thyroid disruption
- Liver dysfunction

In one home a mother and daughter in separate parts of the house were dropped simultaneously to the ground in severe pain by what appears to have been uncontrolled blasts that have come through the house.

This has happened twice in the same house and a similar incident happened to a child and the mother this year (also in Fourways).

A report was received at the end of last year of a mother who has also been collapsing with severe pain in Moreleta Park. She has metal in her spine, which would make her more susceptible.

People with pacemakers are also at risk with increased frequencies and levels that can cause interference with the device.

Animals have been suffering gastro and coughing /choking type fits that last for several minutes on some days. Hair loss on cats has also been reported and seizures. A vet in Bryanston has commented on the absurd amount of cats with hair loss.

Unexplained bird deaths at two bird places in Fourways have occurred and an Egyptian goose dropped out the sky in October at a shopping centre at Witkoppen – it survived but was unable to fly and was under vet care. It had no visual damage. (Waterfowl have been noted to be more susceptible to microwave frequencies in studies to date)

Monkeys with severe gastroenteritis and the clustering of bee swarms in aviaries occurred at the same bird park. Other strange bee behaviour has been noted and reported in the Fourways area.

In fact, a report has recently been issued in India calling for a new law for the protection of flora and fauna stated that existing literature showed that EMR are interfering with the biological systems in more ways than one.

The Environment Ministry of India has already constituted a 10-member committee headed by Asas Rahman, director, Bombay Natural History Society (BNHS) to formulate guidelines for the installation of mobile towers.

"There should be a rule to avoid setting these towers near the wetlands and dense forests which are often the breeding centres of several species. We have seen the impacts of towers on herons and water fowls," he said.

One can therefore imagine the potential damage that could be done within South Africa by the continued roll-out of such technology blanketing the country.

In addition there has been some unexplained sudden deterioration (scorched type effects) on trees and plants. A rapid change and deterioration has been noted in Pine trees in areas through Fourways.

An investigation has been requested to the Minister of The Environment. Pictures are attached of some trees at a site in Fourways/Craigavon that are being now monitored and documented with pictures. More are available.

What is being observed is that the effects that have happened to trees next to masts is now happening further afield showing that the EM radiation levels are increasing dramatically across certain areas.

Examples of trees dying next to cell masts are noted already in South Africa (a few examples are attached).

An on-site investigation was requested with the Department of Environment. The Department of Health has been asked on many occasions to investigate, but has advised they do not “have the time nor the resources.”

It is evident that should this roll out proceed throughout South Africa, the impacts would be far reaching not just on the health of the South African public but on the flora and fauna, where there are already concerns.

In fact it has recently been noted that the Secretary Bird had rapidly declined over the last ten years and there have been studies concerned with the decline of insects due to electromagnetic frequencies.

We were able to ascertain at the time that there were in fact LTE tests being conducted. However, no-one from ICASA to the Department of Communications seemed to be aware of this or where these tests were in fact being conducted.

No licensing or public participation process was ever considered. Our request for answers and investigation at the time was not forthcoming. The foundation obtained this week, the actual cluster areas of the testing. (Please see attached). It is relevant that the areas that we noted last year of having many reports of illness, fall within those clusters. Our letter spoke of the gastroenteritis epidemic in Fourways and we provided research that certain bacteria like *Ecoli* can be stimulated by electromagnetic fields. A full and public investigation is required to determine the extent and severity of these adverse health effects.

Whilst we did not note the East Rand as the foundation did not receive reports directly, the following media reports which we have now called up this week noted a “superbug “ which appeared to have resulted in several deaths.

They all fall within the same time frame of what we had reported in our letter. It is related also to the *E coli* bacteria.

<http://www.timeslive.co.za/local/2011/10/17/superbug-hits-nine-in-private-hospitals>

Israel has prohibited the roll-out of 4G/LTE for health reasons. In a media report:

“The Health and Environmental Protection ministries of Israel told the Communications Ministry on Sunday that they will oppose the expansion of cellular phone infrastructure to accommodate “fourth-generation” (4G) devices, at least until any health effects from the radiation are examined in depth.

The directors-general of the two ministries, Dr. Ronni Gamzu and Alona Schefer Caro, called on Communications Ministry Director-General Eden Bar-Tal to co-ordinate with them on the issue.

They wrote in an urgent letter that upgrading infrastructure to introduce fourth-generation cellular phones is liable to increase the use of such technologies and increase the public’s exposure to cellular electromagnetic radiation.

Its effects on health “have not yet been adequately proven,” Gamzu and Schefer Caro concluded, “thus the cautionary principle must be observed.”

<http://www.ipost.com/Health/Article.aspx?id=210138>

EMF Safety Network files lawsuit against Sebastopol 4G cell tower

<http://www.buergerwelle.de:8080/helma/twoday/bwnews/stories/3586/>

A town in Arizona has also rejected the service of 4G

<http://news.heartland.org/newspaper-article/2010/10/19/arizona-towns-reject-4g-services>

It is refreshing to note that they were given the choice, unlike in the situation we find ourselves in, here in South Africa. As detailed before, South Africans are being severely affected already by the current electromagnetic levels and technologies and the addition of 4G/LTE can only exacerbate the situation.

Belgian citizens have protested against 4G/LTE and have filed a court action.

http://www.next-up.org/pdf/European_Electrosmog_Protest_on_16_Nov_2011_in_Brussels.pdf

The amount of service providers in South Africa wanting to roll out the service if it is allowed will result in a bigger impact on health and environment and the deployment of even more towers.

Whilst it is currently only noted that the service is currently planned from towers, the same service from satellite should not be considered at all.

America has prevented the Light Squared LTE roll-out due to interference with GPS and aviation systems. NASA has expressed that it would effect their GPS stations for earthquake monitoring .

The Federal Aviation Administration has pointed out that it will impact on their efforts to make flying safer as it will intrude on their systems. Testing’s have shown this system will interfere.

<http://news.sciencemag.org/scienceinsider/2011/09/planned-4g-network-draws-fire.html>

“It is time to put an end to this dysfunctional testing exercise that has only proven what we have known all along – that operation of Light Squared’s proposed broadband terrestrial network will cause catastrophic harm to the aviation industry and the many other critical sectors that rely on GPS every day. Light Squared’s ‘mitigation’ and ‘solution’ proposals are as impractical as its original plan, and it would be irresponsible to waste any more industry, user, and government time, money, or resources to futilely attempt to find otherwise.”

Philip Straub, Vice President for Aviation Engineering, Garmin International, Inc

http://www.saveourgps.org/pdf/Coalition_TWG_Release_06302011.pdf

Terrestrial Wireless Applications to Satellite Applications

Adopted by International Associations of the Satellite Communications Industry

Position Statement: National administrations should recognize the potential for massive disruptions to C band satellite communications, radar systems and domestic microwave links, if spectrum is inappropriately allocated to, and frequencies inappropriately assigned for, terrestrial wireless applications in the C-band (specifically 3.4 – 4.2 GHz).

Executive summary:

“Satellite communications technology in the C band is used for broadcasting television signals, Internet delivery, data communication, voice telephony and aviation systems. The satellite systems that operate in the 3.4-4.2 GHz band (C band) are suffering substantial interference, to the point of system failure, in places where national administrations are allowing Broadband Wireless Access systems like wi-fi and wi-max to share the same spectrum bands already being used to provide satellite services. The same will happen if 3G and the planned 4G mobile systems (also referred to as IMT systems) are allowed to use the frequencies used in the C band for satellite downlink services as is being contemplated by some administrations in the context of WRC-07 agenda item 1.4.

It is critical that governments and spectrum management authorities recognize the very real damage caused, and tremendous threat posed, to satellite services by use of the Standard C and Extended C-bands for terrestrial wireless systems.”

Within the same Spectrum Policy document the allocation of Digital TV is raised. We wish to bring to your attention a letter from a medical specialist in Germany to President Obama on the subject:

<http://www.scribd.com/doc/12548638/Warning-Against-Adverse-Health-Effects-From-the-Operation-of-Digital-Broadcast>

What very carefully needs to be considered are the masses of signals that the South African Public are already being subjected to. This is amplified with so many service providers competing in this market.

Our health and our lives are at stake and we are being experimented on without our permission or consent.

From within the industry it is well known the problems as below:

Swisscom admits that WiFi can Harm People

Swisscom reveals the true DANGER of WiFi in a patent application. Swisscom is the leading telecom provider in Switzerland and it devised a way to reduce the microwave radiation from WiFi (also known as WLAN or wireless local area network). In its patent application, Swisscom clearly states the elevated risk of cancer and genetic damage from the constant low level microwave/RF exposure from WiFi.

Below are excerpts from page one and page two. The full application is at the bottom of the page.

"The influence of electrosmog on the human body is a known problem. The health risk from mobile radio transmitters (WiFi base stations) handys and DECT telephones has been an explosive subject among the general public...To meet the concerns of science from the legislative side, the permissible limit values have thus been lowered several times (in Switzerland) and technology has been increasingly focused on this problem. The risk of damage to health through electrosmog has also become better understood as a result of more recent and improved studies. When, for example, human blood cells are irradiated with electromagnetic fields, clear damage to hereditary material has been demonstrated and there have been indications of an increased cancer risk (Mashevich M., Folkman D. , Kesar A., Barbul A. , Korenstein R. , Jerby E. , Avivi L., Department of Human Genetics and Molecular Medicine, Tel-Aviv University, Tel-Aviv, Israel, "Exposure of human peripheral blood lymphocytes to electromagnetic fields associated with cellular phones leads to chromosomal instability," Bioelectromagnetics, 2003 Feb. , 24 (2): 82-90).

"Control experiments (without microwave/RF radiation) carried out in the temperature range of 34.5 to 38.5 °C showed that elevated temperature is not associated with either the genetic or epigenetic alterations...These findings indicate that the genotoxic effect of electromagnetic radiation is elicited via a non-thermal pathway. Moreover aneuploidy is to be considered as a known phenomenon in the increase of cancer risk."

"Thus it has been possible to show that mobile radio radiation can cause damage to genetic material, in particular in human white blood cells, whereby both the DNA itself is damaged and the number of chromosomes changed. This mutation can consequently lead to increased cancer risk. In particular, it could also be shown that this destruction is not dependent upon temperature increases, i.e. is non-thermal."

From page 5, section 25:

"Despite increasingly strict national (Swiss) guidelines with respect to legally specified limits, the impact of electrosmog in WLANs on the human body can be considerable. Moreover it is to be expected that this impact will continue to increase in the future for many people...First, more and more applications require additional, usually higher-energy frequency bands in order to be able to meet the growing need with respect to transmission rate."

From page 6, sections 5-15:

"There has been a lot of effort put into providing evidence for the detrimental effects of electrosmog and setting corresponding limits. Limits and guidelines alone will not suffice, however, to further contain the electrosmog in WLANs since the development in WLANs runs in exactly the opposite direction, as mentioned above. WLANs even represent zones in which people usually spend longer periods of time (place of work, Internet, network games, etc.) and are therefore to be considered as particularly problematic with

respect to radiation impact...This means that even when the WLAN is not being used at all, an underlying stress from electromagnetic radiation remains for persons in the Basic Service Area of an access point of the WLAN. For example, in the case of WLANs at places of employment, such as offices etc., there exists therefore permanent stress from electrosmog from the WLAN on the employees of the company or organization."

The entire Swisscom international patent application can be viewed [click here](#)

It is of concern that the government authorities are not applying their minds to the problem and introducing legislation and controls on an industry that is clearly self-regulating, unmonitored and out of control.

We appeal for updated legislation to be put in place and we attach again for your reference the levels that are being adopted in other countries to protect their citizens. These countries have noted the ICNIRP levels that the NDOH prescribed to are obsolete and are only based on 6 minutes of thermal heating on a large adult male – not 24/7 on the population and especially not on children, women and those whose health is already compromised. Modulations also need to be factored in. No safe levels have been declared for children.

Of major concern is that there is no national or regional grid indicating all existing base stations/ cell masts/antennae/roof installations / high sites/Broadcast towers drawn up in any government department including the Departments of Health or Environment or GDARD (who have signed these masts off for many years) or ICASA.

It should be imperative that **all service providers** make available a grid of their entire network (legal and illegal) in order that a full assessment may be done. This would need to include rooftop or building installations. What is being transmitted would be required too.

This would enable a geographical overlay of all service providers' installations on a map both nationally and regionally. Frequencies and pulse rates could then be made public on a government website.

This is essential in other countries and Israel has a monitoring system where every base station and antennae is monitored full time on a national controlled grid and controlled by the government and not the industry.

The economic wellbeing of a country is reliant on the mental and physical well-being of its inhabitants.

Children, our precious resource needs to be protected where they study and where they sleep.

Who will support and be responsible for those who cannot work anymore due to being affected or made so sensitive by overexposure that they cannot live in a city or operate a computer? The service provider or those who did not protect by implementing a precautionary policy?

South Africa signed The Precautionary Principle at the Earth Summit in Rio in 1992, which was reinforced in 2002 at The Johannesburg Summit. (The Precautionary Principle is noted in NEMA)

The Constitution (Section 24) states that everyone has the right to an environment that is not harmful to their health and well-being and that everyone has the right to have the environment protected for the benefit of present and future generations through reasonable legislation and other measures that prevent

pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The Bill of Rights of the South African Constitution

In particular, section 12(2) guarantees that **'Everyone has the bodily and psychological integrity, which Includes: The right (b) to security in and control over their body; and (c) not to be subjected to medical or scientific experiments without their informed consent.'**

The Bill of Rights also gives special protection for children, stating: **"A child's best interests are of paramount importance in every matter concerning the child"**

It appears as with what we are being subjected to now, is in total contradiction to all our constitutional rights.

A press release from Next-up in France which stated that landline use was increasing again also stated the following :

For the time being the phone companies' revenues are still being boosted in the developing countries, particularly in Africa which is a truly limitless Eldorado, with its favourable geopolitical conditions and a public that has no awareness of any health risks. Considering the poverty in some African countries it's even indecent, yet it is entirely possible that, in the face of the phone companies' aggressive marketing and business methods, the demand for mobile phones will literally explode.

[http://www.next-up.org/pdf/Mobile Telephony the hard truth of the business 20 08 2010.pdf](http://www.next-up.org/pdf/Mobile_Telephony_the_hard_truth_of_the_business_20_08_2010.pdf)

A letter sent by one of the world's top researchers Professor Olle Johansson to the Minister of Health and to many addressed in this letter states:

"I encourage governments to adopt a framework of guidelines for public and occupational EMF exposure that reflect the Precautionary Principle. The Precautionary Principle states when there are indications of possible adverse effects, though they remain uncertain, the risks from doing nothing may be far greater than the risks of taking action to control these exposures. The Precautionary Principle shifts the burden of proof from those suspecting a risk to those who discount it — as some nations have already done. Precautionary strategies should be based on design and performance standards and may not necessarily define numerical thresholds because such thresholds may erroneously be interpreted as levels below which no adverse effect can occur.

You often hear about "safe levels" of exposure and that there is "no proof of health effects", but my personal response to these seemingly reassuring statements is that it is very important to realize, from a consumer's point of view, that "no accepted proof for health effects" is not the same as "no risk". Too many times, 'experts' have claimed to be experts in fields where actually the only expert comment should have been: "I/we just do not know". Such fields were e.g. the DDT, X-ray, radioactivity, smoking, asbestos, BSE, heavy metal exposure, depleted uranium, etc., etc., etc., where the "no risk"-flag was raised before true knowledge came around. Later on, the same flag had to be quickly lowered, many times after enormous economic costs and suffering of many human beings. Along those lines, it is now (regarding "the protection from exposure to electromagnetic fields" issue) very important to clearly identify the background and employment (especially if they sit, at the same time, on the industry's chairs) of every 'expert' in different scientific committees, and

likewise. It is, of course, very important (maybe even more important?) to also let 'whistleblowers' speak at conferences, to support them with equal amounts (or even more?) of economical funding as those scientists and other 'experts' who, already from the very beginning, have declared a certain source or type of irradiation, or a specified product, to be 100% safe.

There are other appeals and resolutions attached. A submission of the latest research papers have already been submitted to the Ministers of Health, Environment and Communications. However, a list of some of the documents are attached.

There is already almost 100% cell phone coverage throughout South Africa including wireless telephone systems. People have access in remote areas through their cell phones by several providers.

A properly planned optic fibre network, from backbone to final source, is the safer way if broadband is to be expanded - without last mile access of WiMax or LTE.

What needs to be considered are the masses of signals that the South African Public is being subjected to already from many service providers : 2G/3G/ WiFi/ WiMax/ TV/ Satellite/ Mobile TV/ Radio/Wireless Telephone systems/ Police / Security.

LTE essentially is just for the industry to promote and benefit from the sale of the next generation of devices suited to LTE.

Whilst it is appreciated that Minister Pule's role is to oversee the communication needs of South Africa, we are sure she would not want to do it at the risk of harm to the environment and the health of the people of South Africa, which may economically, far outweigh any perceived benefits.

We therefore reconfirm our objection of the use of LTE and Digital TV until such time as it has been conclusively been proven safe and the current levels and their impacts are investigated transparently and openly.

Yours sincerely

Tracey-Lee Dorny
Chairman
Faiza Dawod and Advocate Vicky Benjamin
Legal
Committee members.