

Bahrain
Report on EMF Activities
18TH International Advisory Committee Meeting on EMF
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Introduction

The Kingdom of Bahrain making use of modern and up-to-date technologies and is using tools, equipments, and machinery for individual, domestic, medical, commercial and industrial purposes which radiate Radio Frequencies (RF) and Electro Magnetic Radiation (EMF), which is considered as a source of hazard to the public health and the environment. The main sources of RF and EMF include television, radio, computers, mobile and cellular phone, microwave ovens and equipment used in medicine at universities and in industries.

In response to the public concern regarding EMF exposure and its adverse impacts on human health, field studies and investigation are carried out during and Health & Safety Guidelines have been issued to protect the public and workers from the Non Ionizing Radiation (NIR) exposure

General Research Activities

According to the Prime Ministerial Edict No (5) Of 2012 Promulgating the Regulation Concerning Radio Communication Stations and Networks, The Supreme Council for the Protection of Marine Resources, Environment and Wildlife is the responsible authority in the Kingdom of Bahrain to measure and monitor the emission of electromagnetic fields to ensure compliance with the standards provided for in Resolution No. (4) Of 2009.

The ambient level of Radio Frequency (RF) field strengths is measured randomly to ensure the compliance with the standards and also measurements are taking place in response to the public concerns and complaints from the presence of mobile base stations near their houses.

The highest total exposure levels for typical public sites measured as a response to the public concerns during 2012 were 2.139% & 1.709% of the ICNIRP level. All measurement taken in open air at a distance from 90 m from the base station. Using INSITE Free radio frequency spectral analysis from 100 KHz – 3 GHz.

Feasibility Study on Evolution of Existing and New Deployment of Radio-Communication Stations in the Kingdom of Bahrain conducted by the Telecommunications regulatory Authority (TRA), to evaluate options for increased sharing of towers in Bahrain at the request of the TRA and the 4 Licensed Operators.

(TRA) found the Current levels of sharing are low (~4%); however in line with other markets in a similar state of development and Increasing cooperation between the Licensed Operators can lead to increased sharing; however new technology is required to provide capacity

A number of activities have taken place:

-Interviews with stakeholders (TRA, 4 licensed operators and the Municipalities).

- Site visits (42 separate sites were inspected representing across section from all 4 Licensed Operators)
- Reports Developed
- Models Developed

The analysis indicated up to 19% sharing could be achieved vs. existing level of (4%), the greater the level of cooperation between the Licensed Operators in a Joint Venture the greater the scope for sharing of passive infrastructure.

Legislations and Policies

“Prime Ministerial Edict No. (5) Of 2012 with respect to the issuance of Radio-communications Stations and Networks Regulation” have been issued by the Council of Ministers. These Guidelines have been produced jointly by representatives from the Telecommunications Regulatory Authority, the Wireless Telecommunications Networks Operators, the Ministry of Municipalities and Agriculture Affairs, the Municipalities Councils, the Public Commission for the Protection of Marine Resources, Environment and Wildlife and Civil Aviation Affairs. These Guidelines are not legally binding but are intended to inform third parties as to the approach the industry and other stakeholders are taking to the important issues of deploying wireless telecommunications network facilities. As per the regulation, the measuring of the RF is now within the responsibility of the Supreme Council for the Protection of Marine Resources, Environment and Wildlife.

Conclusion

In the Kingdom of Bahrain, the international guidelines have been adopted by the Commission for the Protection of Marine Resources, Environment and Wildlife in Ministerial Order No. 4 of 2009 All organizations which transmit radio frequency signals are required by this Order to comply with the international guidelines.

In 2012 Order No. 5 issued by the Council of Ministers on the deployment of masts to ensure efficient and effective wireless telecommunications networks development but in the same time taking into consideration the environment and health concerns of the general public.

The Supreme Council for the Protection of Marine Resources, Environment and Wildlife conducting measurement randomly throughout the Kingdom of Bahrain, also they are receiving complaints from the public and carrying out RF measurements as a response to those complaints to ensure the compliance with the international guidelines and to ensure and protect the public health from any possible health risk .

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