

THE UNITED REPUBLIC OF TANZANIA  
**TANZANIA COMMUNICATIONS REGULATORY AUTHORITY**



**PUBLIC NOTICE**

**ELECTROMAGNETIC RADIATION FROM TELECOMMUNICATIONS AND BROADCASTING EQUIPMENT AND HEALTH**

The increased use of communication equipment such as mobile phones, base stations, antennas, radar equipment, radios, televisions, computers etc in Tanzania and elsewhere around the world has raised public interest in health issues associated with exposure to electromagnetic radiation.

We wish to clarify as follows:

1. Telecommunications and broadcasting equipment as mentioned above emit electromagnetic waves which are within exposure limits consistent with the recommendations (reached after extensive research of over 50 years) of many international organizations, including the following bodies:

- International Telecommunications Union (ITU)
- World Health organization (WHO)
- International Commission on Non-ionizing Radiation Protection (ICNIRP)
- GSM Association
- Mobile Manufacturers Forum (MMF)

2. The radiofrequency (RF) database on biological and health effects is extensive, thorough and global with thousands of scientific publications. The rate at which radiation is absorbed by the human body is measured by the "Specific Absorption Rate (SAR)" in W/kg. The conclusions from these publications show that there is strong evidence that RF exposure below a certain threshold does not cause harmful effects to biological systems. The intensity of the electromagnetic waves falls with an inverse square law from the source. According to ICNIRP and ITU, the threshold localized SAR is 2 W/kg (Head and trunk) and 4 W/kg (Limbs) for the general public and much higher values for occupational exposure.

3. The electromagnetic waves form a wide spectrum of which the RF is only a portion. It includes Radio waves, microwaves, infrared, visible, Ultraviolet, x-rays, gamma-rays. The sources of these waves can be natural or artificial. The RF is non-ionizing as illustrated in the attached figure. Generally base station antennas are mounted on a tower normally 15 to 50 m high or on roof tops and hence the radiation reaching a consumer is within the threshold limit.

4. TCRA is promoting infrastructure sharing among service providers and has therefore introduced the Converged Licensing Framework comprising four licenses; Network Facility License, Network Services License, Application Services License and Content Services License. Further, the Authority has enacted the Tanzania Communications (Access and Facility) Regulations (2005) which encourage operators to share facilities including towers.

5. The weight of substantial international scientific research is that there is no substantial evidence that the use of communications equipment causes harmful health effects. Consumers should continue to have confidence in the many benefits of modern technology including mobile telephony, TV and computers which are used by people globally. This information has been prepared on the basis of substantiated research and invariably some of the terms used are necessarily scientific. If anything is not clear and wherever there is a complaint, the Authority will be glad to explain or make the necessary follow up.

Issued by:

**Director General  
Tanzania Communications Regulatory Authority (TCRA)**