



Millicom International Cellular

Corporate Position on Key Issues

Radio Frequency Fields

1) Social and economic context

Mobile phones are improving communication all over the world. They significantly contribute to sustainable economic development by providing access to services and jobs in remote areas, as well as reducing the need for transport. They are increasingly becoming a part of people's every day life around the world.

Numerous electromagnetic field sources have become the focus of health concerns, including power lines, microwave ovens, computer and TV screens, security devices, radars and most recently mobile phones and their base stations.

Although experts have found no convincing evidence that the use of mobile phones and the masts that make them work carry health risks, concerns remain on the part of some people.

2) Definition of main terms

Radio frequency (RF) fields are a form of low-energy electromagnetic fields (EMF). They occur naturally (ex: light from the sun and the Earth's natural magnetic field are natural EMFs) and have artificial sources (ex: radio, television, etc.). RF fields are emitted by mobile phones and base stations (antennas) and the human body is exposed to them.

3) Issue at stake

There have been many scientific studies on the effects of radio frequency (RF) fields on health. Experts have found no convincing evidence that exposure to low intensity RF fields from mobile phones and base stations can damage health. Despite these results, discussion continues among scientists. Because mobile phones are used by a large proportion of the world population, further research is being undertaken, much of it under the coordination of the World Health Organization.

4) Facts and figures

According to the World Health Organization (WHO), "None of the recent reviews have concluded that exposure to the RF fields from mobile phones or their base stations causes any adverse health consequence."

The International Commission for Non-Ionizing Radiation Protection (ICNIRP), set up by the WHO, has issued guidelines on levels of exposure to RF fields, including that from mobile phones and base stations. These are based on published scientific findings and include a safety margin. Exposure is measured using the specific absorption rate (SAR) – the amount of energy from an RF field absorbed by the human body. They set a maximum SAR value of 2W/kg for a mobile phone, and 4.5 W/m² (at 900MHz) or 9 W/m² (at1800MHz) for base stations.

Regarding base stations, WHO has stated that: "Antennas emit a very narrow beam of radiowaves which spreads out almost parallel to the ground. Therefore, radiofrequency fields at ground level and in regions normally accessible to the public are many times below hazard levels. Guidelines would only be exceeded if a person were to approach to within a metre or two directly in front of the antennas."

In the case of antennas installed on the rooftop of buildings, WHO indicates that: "Since antennae direct their power outward, and do not radiate significant amounts of energy from their back surfaces or towards the top or bottom of the antenna, the levels of RF energy inside or to the sides of the building are normally very low."

5) Millicom beliefs and principles

Millicom regards as paramount safeguarding the health and safety of customers, employees and the public.

While research and debate continues in the scientific community Millicom will act to mitigate exposure of the public and employees to base station and handset radiation.

Concerning base stations, fences or other protective measures are implemented to prevent unauthorized access to areas where exposure limits could be exceeded (principally, those located on building rooftops).

Regarding handsets, we are aligned to the position of the WHO: "Present scientific information does not indicate the need for any special precautions for use of mobile phones. If individuals are concerned, they might choose to limit their own or their children's' RF exposure by limiting the length of calls, or using 'hands-free' devices to keep mobile phones away from the head and body."

We require from all our network equipment suppliers to comply with ICNIRP and local regulations regarding RF emissions. Our network sites comply with local and international (ICNIRP) RF fields emission norms.

In the deployment of our network, we also require our subcontractors to strictly adhere to local and international health-based guidelines in order to limit the exposure of their employees to RF fields.

Millicom believes that base station placement decisions should take into account aesthetics and public sensibilities. Therefore, we communicate openly with local governments and the

public during the planning stages for a new antenna to help facilitate public understanding and greater acceptance of the new facility.

6) Current initiatives

Millicom only sells handsets that comply with the International Commission for Non-Ionizing Radiation Protection (ICNIRP) guidelines. Many handsets are already sold with ear sets, and customers who want to limit their exposure can always come to our stores to buy ear sets.

As an illustration of our commitment to inform and consult communities, an interesting example comes from Bolivia. There we organize neighborhood meetings with experts of the WHO, local regulatory body and media, in order to facilitate the approval of neighborhood associations for installing antennas. We also distribute brochures developed with the regulatory body, in order to address public concerns about the functioning and health implications of mobile phones and masts.

In 2009 and 2010, Millicom will examine the best ways to regularly inform customers with the most up-to-date scientific information. A Group policy will be progressively implemented from 2009 in local operating companies to better manage the potential health and safety risks that may arise from employees and subcontractors being exposed to RF fields, particularly when very close to the antenna, where the RF field strength is the greatest.

7) Further information

Additional information can be found on the websites of:

ICNIRP (International Commission on Non-Ionizing Radiation Protection), Munich, Germany

World Health Organization, International EMF Project, Geneva, Switzerland

Mobile Manufacturers' Forum (MMF), an international association of manufacturers of mobile phones and other equipment.