

I submit this comment as healthcare professional

Question 14

What scientific evidence exists regarding potential adverse environmental effects associated with RF radiation?

Observation and documentation of trees in the vicinity of over 1,500 mobile phone base stations (2005 to 2026) and studies (2016, 2021) suggest a causal relationship between RF radiation and tree damage.

The reason for the tree observation:

After the Bamberg Appeal was published in 2004 – in which 130 medical doctors warned against expanding mobile phone networks – many residents living near mobile phone base stations contacted the initiative for help with health issues. We visited affected individuals at home, documented their symptoms, and took RF radiation measurements. We learned that many people became sick far below the legal limits. We urged all responsible authorities to start health investigations of the long-term-exposed residents. One example (see attached):

<https://mdsafetech.org/wp-content/uploads/2021/04/cell-tower-letter-2005-dr.-cornelia-waldmann-selsam-to-german-state-chancellery-.pdf>

But the desperately needed investigations have not been carried out.

During our visits, the affected residents showed us that changes and damage to the trees started around the same time as their symptoms appeared. People and trees got sick at the same time!

The tree damage was easily visible. Because we hoped to be able to show quickly the causal relationship between RF radiation and tree damage we started to document trees around mobile phone base stations

Conifers, deciduous trees, and shrubs were all affected. Of particular concern was the unilateral crown damage that began on the side of the tree facing the mobile phone base station. There was also a contrast between the damaged trees in front of the house, which had a direct line of sight to the base station, and the healthy trees behind the house, which did not. The health of trees can be affected by heat, drought, frost, soil composition, sealing, salt spreading, air and soil pollutants, and pests. However, these factors do not explain crown damage that starts on one side of a tree or damage found near bodies of water.

In May 2006, the head of a city parks department said the following during a conversation: "For the past two to three years, vitality disorders have occurred that I cannot explain." This prompted us to investigate.

Dr. H. Eger, Dipl.-Ing. F. Mayerhofer, Dr.-Ing. Dipl.-Phys. V. Schorpp, Dipl.-Met. W. Sönning (certified meteorologist), and I compiled references on the effects of electromagnetic fields on plants. We were overwhelmed by the amount of existing knowledge on the subject. In 1916, Professor Dr. J. Zenneck, a physicist at the Technical University of Munich, described how a water jet can act as an antenna that receives and transmits radiofrequency electromagnetic waves.

About 1920, communications engineers discovered that trees act as receiving antennas for radio waves. For example, a tall poplar tree enabled radio reception from the Eiffel Tower, despite being located 300 km (186 mi) away.

Since 2004, various research groups have conducted over 200 laboratory experiments investigating the effects of RF radiation. These experiments revealed that germination, root and shoot growth, morphology, cell membranes, and cell metabolism were affected.

Between 2005 and 2026 we documented trees and took RF radiation measurements. We found evidence of RF radiation related tree damage near every mobile phone base station we visited.

For the study “Radiofrequency Radiation Injures Trees Around Mobile Phone Base Stations“, 2016, we selected 60 damaged trees, in addition to 30 randomly selected trees and 30 trees in low radiation areas (n=120). The measurements of all trees revealed significant differences between the damaged side facing a phone mast and the opposite side. Thus, we found that side differences in measured values of power flux density corresponded to side differences in damage. Statistical analysis demonstrated that electromagnetic radiation from mobile phone masts is harmful for trees. We asked for more scientific research on trees under the real radiofrequency field conditions (see study attached).

In 2021, forestry scientists published a study on the flower and cone yields, as well as the seed germination rates, of Calabrian pine trees after 14 years of exposure to a mobile phone base station that began operating in 2005: Ozel HB, Cetin M, Sevik H, Varol T, Isik B, Yaman B (2021). The effects of base stations as an electromagnetic radiation source on flower and cone yield and germination percentage in *Pinus brutia* Ten.

Proximity to the base station significantly reduced the number of flowers and cones. Example of female flowers: 502 flowers at a distance of 800 m; 44 flowers at a distance of 100 m. Example of male flowers: 2,868 flowers at a distance of 800 m; 248 at a distance of 100 m. The germination rate was 91% at a distance of 800 m and 33% at a distance of 100 m (see study attached).

The book „Tree Damage Caused by Radiofrequency Radiation - Key Observations from 2005–2025 in Germany“ presents examples of tree damage at over 1,500 mobile phone bases stations. Additionally it summarizes research since 1932 including translated archival newspaper articles that highlight early warnings and historical observations related to RF radiation.

<https://ehsciences.org/new-book-tree-damage-from-cell-tower-and-wireless-rf-radiation/>

Conclusion:

Trees make the impact of RF radiation from mobile phone base stations visible.

Research has found that tree damage near mobile phone base stations occurs well below current exposure limits. However, these limits were set without considering plants. This serious suspicion requires an immediate scientific investigation in the field. Until the concern has been disproven, installing new mobile phone base stations and upgrading existing ones should be strictly forbidden.

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