



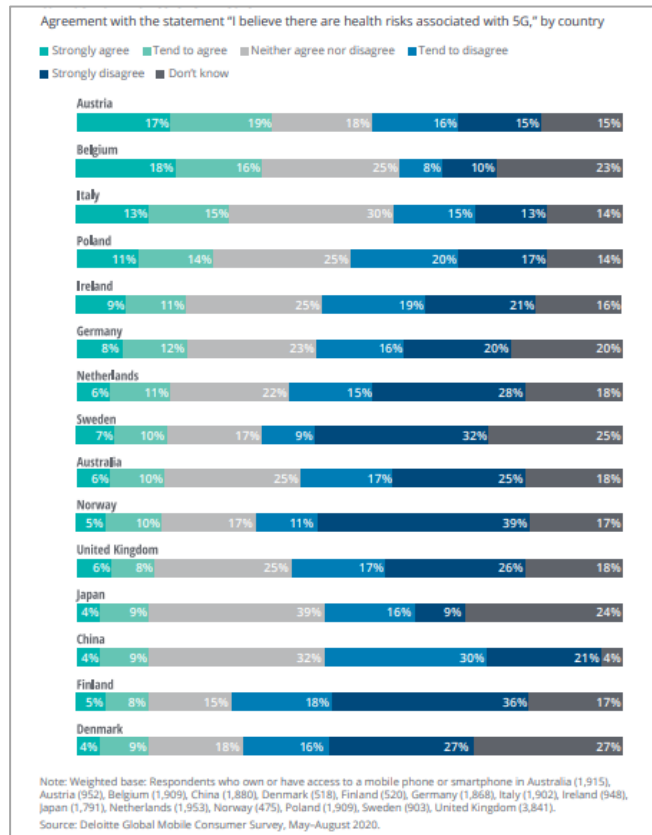
# ***Transforming the Future, Releasing Digital Innovation!***

**5G and beyond- EMF considerations for a Sustainable Digital Transformation:  
What about the views of European telecom operators?  
25 October 2022**

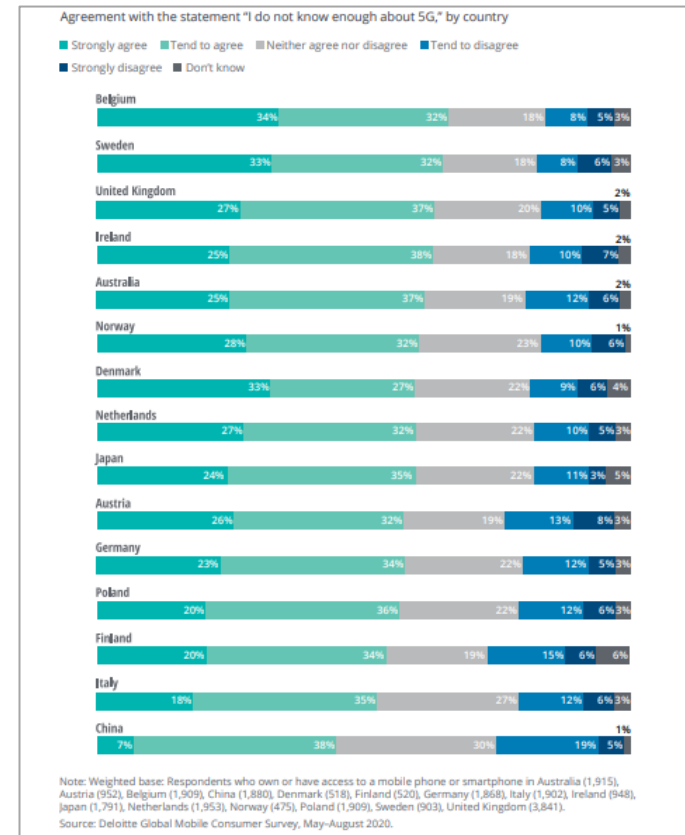
**Pinar Serdengeçti, Regulation and Competition Affairs Director**



# EMF, wireless network technologies and EU consumers' concerns



- A substantial percentage of consumers in advanced economies believe that 5G can be harmful to their health.



- Understanding of 5G is low in multiple markets and there is natural difficulty of understanding such a technical issue.

## Despite independent and authoritative expert reviews...

EU- SCHEER Preliminary Report (2022), available [here](#).

FR- ANSES OPINION and REPORT on exposure to electromagnetic fields linked to the deployment of “5G” technology (2022), available [here](#).

DE- Opinion of the Radiation Protection Commission – (SSK) (2022) - fields of mobile communications in the course of the current 5G network expansion – Technical aspects and biological effects in the lower frequency range -FR1, up to approx. 7 GHz-, available [here](#).

UK- Institution of Engineering and Technology (IET) fact file (2022). Electromagnetic fields and health, available [here](#).

EU- Joint Research Centre. Electromagnetic emissions from mobile networks and potential effect on health – Preliminary study. Chountala and Baldini. EUR 30586 EN, Publications Office of the European Union, Luxembourg (2021), available [here](#).

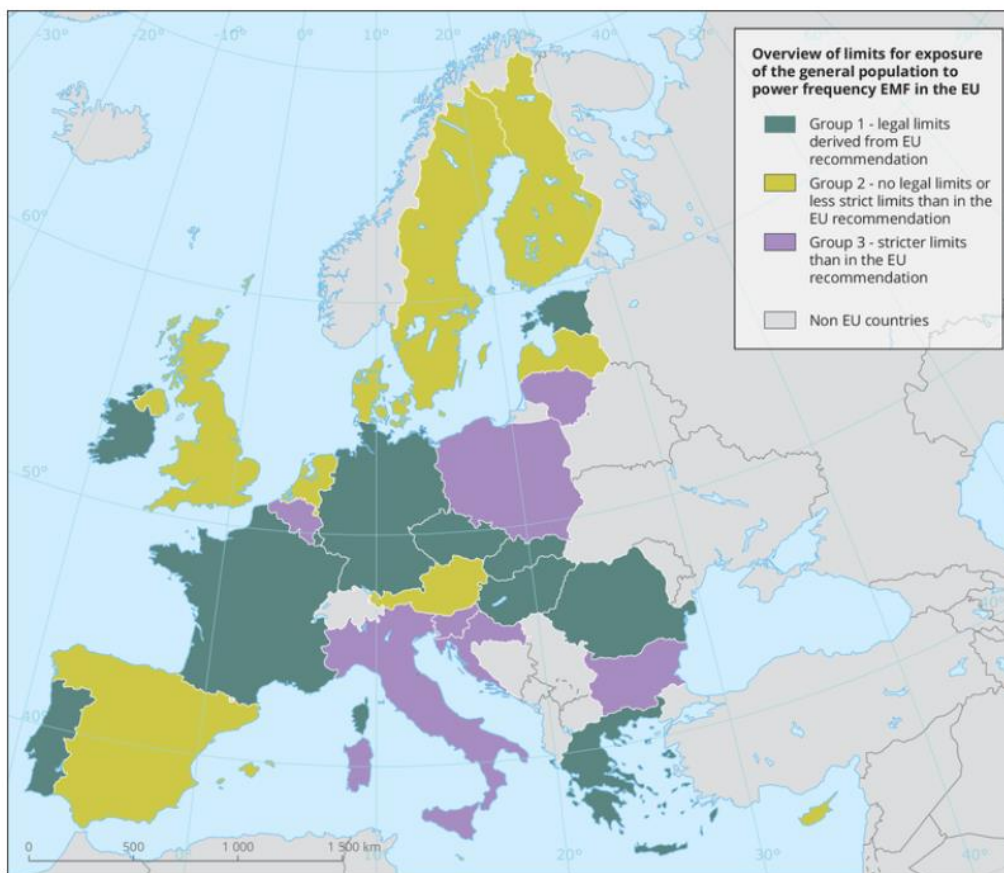
SE- SSM’s Scientific Council on Electromagnetic Fields. Recent Research on EMF and Health Risk. Fifteenth report 2021, available [here](#).

INT- International Commission on Non-Ionizing Radiation Protection (ICNIRP). Guidelines for limiting exposure to electromagnetic fields (100 kHz to 300 GHz). Health Physics. 118(5):483-524.(2020), available [here](#).

which do not  
establish a link to  
health risks where  
RF-EMF levels  
comply with the  
limits in the ICNIRP  
guidelines...

## RF-EMF effects on health remain a political concern, translating into...

- Continuous application of stricter EMF limits with respect to those allowed by the Council Recommendation (1999/519/EC) on the limitation of exposure of the general public to electromagnetic fields (EMFs) from 0 Hz to 300 GHz in:
  - Belgium
  - Bulgaria
  - Croatia
  - Italy
  - Lithuania
  - Slovenia
  
- National governments' reluctance to support 5G networks rollout by lowering those limits.



**Source:** European Environment Agency, available [here](#), last update: September 2020. Poland has reviewed in 2021 the EMF limits to align them to the values of Council Recommendation 1999/519/EC.

# and peoples' concerns remain strong, translating into...

05/08/2020 Published in CITIES VERSUS MULTINATIONALS  
**"Stop 5G". Residents, doctors and judges going against the grain of Italy's infatuation with smartphones**

European institutions, telecom corporations and national governments are rushing to roll out 5G on the continent. The technology is promoted as a driver of growth and employment, but questions remain unanswered about its real economic benefits for people. On the ground, some are getting worried about the health and environmental impacts of installing dozens of new antennas. Does local resistance to 5G stand a




Accueil du site • Actualité • Nationale  
**Contre la 5G : pétition et recours devant le Conseil d'Etat**  
 par priartem

En octobre, Priartem et Agir pour l'environnement **avaient appelé à un moratoire** soutenu par plusieurs CNG, eu égard aux risques que fait peser ce projet pharaonique sur la santé, l'environnement, les libertés publiques... Aujourd'hui, les deux associations annoncent qu'elles engagent un **recours devant le Conseil d'Etat** contre la procédure qui signe le démarrage du programme en France.

« Alors que ce projet d'ampleur aurait dû faire l'objet d'un débat public en bonne et due forme, comme nous l'avons rappelé à plusieurs reprises, le gouvernement lance cette nouvelle technologie dans la plus grande précipitation, **sans en mesurer les conséquences** » dénonce Stephen Kenkove, délégué général d'Agir pour l'Environnement.

Sophie Proletier, présidente de Priartem, renforce le cri : « Alors que la **dominée énergétique et électromagnétique** sont inscrites dans la loi, on sait déjà que le **abandonnement de la 5G augmentera la consommation électrique, évaluée par certains experts à 10 TWh, soit l'équivalent d'une centrale comme Fessenheim** avec que l'exposition aux ondes de la population avec la **multiplication par 8 selon l'ANFR du nombre de « points d'appui » (supérieurs à 4 V/m) »**

Pour **Luc Lafforge**, avocat des associations, cet arrêt est constatable : « Le passage à la 5G aura des conséquences sur l'environnement. Une évaluation environnementale aurait donc dû être mise en œuvre. Cette évaluation est d'autant plus importante que l'intensité est grande sur les conséquences sanitaires d'un tel déploiement, qui se fera au mépris de la réglementation européenne et nationale sur la protection de la santé et au mépris du principe de précaution ».

Priartem et Agir pour l'environnement accompagneront cette procédure judiciaire du lancement d'une **pétition** en ligne en soutien à leur demande réitérée de moratoire.

Signez cette pétition sur <https://stop5g.fr>  
 Téléchargez aussi notre affiche 1

## L'ordinanza del sindaco vieta tutte le antenne 5G

► Il provvedimento, approvato venerdì, ► Bloccata anche la richiesta di Wind T1  
 sospende i procedimenti amministrativi per un impianto da installare a Mejanig

603 COMUNI D'ITA  
 394 SINDACI HANNO

3 REGIONI HANNO APPROVATO MOZIONI PER LA

1 COMUNITA' MONTANA HA APPROVATO MOZIONE news

### STOP 5G.be Collectif pour l'arrêt du déploiement de la 5G

Le « Collectif stop5G.be » est un collectif d'associations qui a été créé le 14 novembre 2019 à l'occasion de la remise de la pétition internationale aux ministres belges des différents niveaux de pouvoir dont c'est la compétence (voir le communiqué ci-dessous, « **Il est urgent d'arrêter le déploiement de la 5G** »).

L'objectif premier du Collectif est l'arrêt du déploiement de la 5G, la 5e génération des normes de la téléphonie mobile.

Les associations membres du Collectif stop5G.be  
 Voir la liste actualisée des associations du Collectif et comment devenir membre en tant qu'association.

- Sommaire
- ▼ Recours en justice en 2020
  - ▼ Communiqués, etc.
  - ▼ Appel à dons, soutien le Collectif
  - ▼ Lettres d'Information
  - ▼ Informez-vous : documents, vidéos, etc.
  - ▼ Agenda
  - ▼ Actions
  - ▼ Pétitions
  - ▼ Matériel promotionnel et mobilisation
  - ▼ Contact



CADONEGHE  
 Firmata dal sindaco un'ordinanza che vieta l'installazione sul territorio comunale di impianti con tecnologia 5G e le sue varianti (4G+, 4GPlus, 4G Evoluato). Il provvedimento è stato approvato venerdì pomeriggio-dopo che Marco Schiavaro, a fine febbraio, aveva già annunciato che non avrebbe rilasciato nessuna autorizzazione alla realizzazione dei ripetitori. L'ordinanza, inoltre, sospende tutti i procedimenti amministrativi in corso. Un paio di mesi fa, infatti, agli uffici comunali è arrivata la domanda di autorizzazione da parte di Wind Tre spa per l'installazione di una nuova antenna per telecomunicazioni e telefonia cellulare, alta 34 metri, in via Marconi a Mejaniga, a brevissima distanza da un altro impianto già esistente. «L'antenna dovrebbe sorgere in un'area privata e nessuna informazione è stata data»



### Belgium says no to 5G mmWave down south

Written by [Mary Lennigan](#) | 25 April 2022 @ 13:49



The government of Belgium's Wallonia region has given the go-ahead for an increase in radiation limits for 5G, but is sticking to its guns on health concerns about millimetre wave.

Protests by local communities against 5G deployment which have then major effects on local and national government decisions.

## RF-EMF and health concerns: a vicious cycle?

- In its recent Preliminary Opinion, the SCHEER mentions it *“could not identify moderate or strong level of evidence for adverse health effects resulting from chronic or acute RF EMF exposure at levels below the limits set in the annexes of Council Recommendation 1999/519/EC and Directive 2013/35/EU”*.
- The operators’ experience on the issue show that the **stricter and disparate national limits** imposed with respect to the values of Council Recommendation (EC/519/1999):
  - **feed the belief that EMF emissions by wireless networks are harmful for health.**
  - require the installation of **more antennas** and hence **feed the feeling of health insecurity.**
  - This, in turn, translates into:
    - institutions’ reluctance to make objective public information campaigns to address the distrust for wireless network technologies such as 5G.
    - national politicians’ reluctance to support 5G networks rollout through structural reforms.
    - local administrations leveraging their autonomy from the central government to create genuine obstacles to the rollout of 5G networks.
- In addition, **specific methods to calculate the EMF limits** in some Member States (e.g.: Italy\*) **create additional burden on the operators’ ability to deploy networks** compared to operators active in other Member States (e.g.: France\*\*) where those methods are not used.

\*Application of the "first come, first served" principle and the predictive control method involving the sum of all electromagnetic field contributions of operators already present in the area and based on authorisations (i.e.: theoretical EMF calculation, not based on the on field measurements).

\*\* Notification-based process and ex-post measurement by competent authorities: operators intending to install a new BTS notify Competent Bodies about their intention to do so and provide relevant info e.g., bands/technology to be used, level of power emitted, etc. Competent authorities can undertake ex-post measurements based on requests from citizens/associations or on their own initiative. Such measures reflect the real level of EMF in selected areas.

## The effects on network deployment and competition are enormous...

- The discrimination between the operators operating in the Member States that correctly adopted the recommended emission limits, and those active in the Member States that imposed very strict values (i.e., Italy, Belgium, Bulgaria) translates into the detrimental effect on **network deployment**.
- For instance, in Italy:
  - There is a significant negative impact on operators' capability to rapidly and effectively deploy their mobile network (not only 5G but for new entrants also 3G and 4G).
  - In some areas **16% of installation/emission requests are blocked**.\*
  - In the most critical regions (Campania, Lombardy, Tuscany, Emilia-Romagna) **delays in obtaining the authorizations/permissions** with respect to EMF regulations **may exceed 120 days**. **In some cases, no feedback is provided at all**. The delays may also depend on the fact that several entities are involved.
  - Stricter EMF limits and unreasonable enforcement procedures **imply higher costs to MNOs**. As a direct consequence, operators indeed **need to install additional BTSs** (due to the fact they can use low level of power as per EMF limits), with higher implementation costs and increased time and complexity to identify suitable locations and additional energy consumption.
  - Operators are **forced to densify their networks** to cover a specific area, **with the subsequent emission of CO<sub>2</sub>**, mainly due to:
    - civil works, required for the construction of new sites/poles and/or the reinforcements of old sites.
    - installation of additional electric and electronic equipment to support the network.
    - extensive activities of site survey which require personnel on site.
  - **Operators** are **constrained** in terms of their ability to deploy networks **due to the application of highly conservative EMF calculation methods** based on theoretical EMF rather than on field measurement.

\*the value excludes KOs for which a re-submission of the application is undertaken.

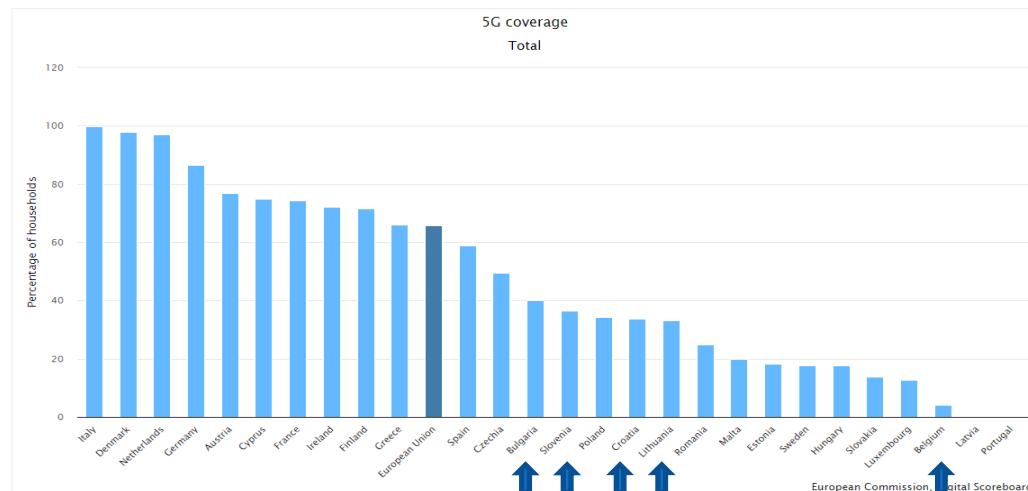
## The effects on network deployment and competition are enormous...

- The discrimination between the operators operating in the Member States that correctly adopted the recommended emission limits, and those active in the Member States that imposed very strict values (Italy, Bulgaria, Belgium) has the detrimental effect also on **competition**:
- For instance, in Italy:
  - It prevents challenger/newer operators from deploying not only 5G but also 3G and 4G and **increasing their network costs** as they have to build new sites to install their antennas.
  - the issue is exacerbated by:
    - the Italian system governing the control of electromagnetic space (**allocation based on a first come first served basis with timeless permits granted and no redistribution among MNOs of EMF space once limits are reached/exceeded**)
    - **opposition by local communities and administrations.**
- In addition, in some Member States, even though the limits are aligned to the Recommendation levels:
  - The limits are used by the first comers to obstruct the network deployment by latecomers (Germany).
  - In Germany 3 big MNOs notify that the 'EMF space' for a given site is at the maximum vis à vis the limit, even when it isn't, and sometimes even when the site is not yet operational.
- The EMF space is a precious and limited resource so **even when the limits are aligned to Recommendation levels, in absence of regulation, the limits can be instrumentalized by the incumbents to exclude the late comers.**



## The effects on network deployment and competition are enormous...

- The discrimination between the operators operating in the Member States that correctly adopted the recommended emission limits, and those active in the Member States that imposed very strict values (Italy, Bulgaria, Belgium) has the detrimental effect on the **internal market**:
  - For instance, in Belgium, the Wallonia Region has recently taken measures which amount to blocking 26 GHz fixed-wireless access network deployment, where BB white spots remain.
  - All Member States with stricter limits (Belgium, Bulgaria, Croatia, Lithuania, Slovenia) except Italy are at the lower end of 5G coverage index.
  - Italy is at the highest end, but this is due to the fact that it was among the first MSs to award 5G spectrum and significant share of this 5G coverage was achieved using 4G spectrum (for which the first entrants already had emission permits).



## A way-out is urgently needed and also possible...

- ecta calls on the international, European and national institutions to **give public notice to findings such as the ones specified in ICNIRP Guidelines and the SCHEER Opinion and to engage in transparent and effective information campaigns in a way to better inform the public opinion.**
- ecta notes that the SCHEER Opinion acknowledges that: *“the latest (2020) ICNIRP exposure guidelines introduce new dosimetric quantities and limits to them, that can protect humans more effectively from emerging technological applications of RF EMF, and, therefore, advises positively on the need of a technical revision of the annexes in Council Recommendation 1999/519/EC.”*
- ecta welcomes a technical revision of the annexes in Council Recommendation 1999/519/EC as suggested by SCHEER, but at the same time, invites the institutions to exercise caution in a way to find a right balance between the need of not raising obstacles to 5G deployments, and the need of respecting the precaution principle.

## A way-out is urgently needed and also possible...

- **ecta** calls on European institutions to contemplate reviewing the recommendation to change the legislative instrument (by **foreseeing a regulation instead of recommendation**) to make sure that the internal market is not distorted, and operators are not discriminated.
- The **regulation should foresee to this purpose an interval and all Member States should set the limits at least equal to the lower end of this interval** while the Member States that prefer can also set the values at the higher end (so to ensure less restrictive limits).
- **ecta** also calls on national institutions to:
  - remain vigilant and to **intervene with adequate EMF space allocation regulations** (fair allocation of the space between the existing operators) by keeping in mind that the EMF space a limited and precious resource which can be used for anti-competitive purposes by the first entrant operators to exclude the new entrants.
  - make sure that **EMF calculation methods avoid any distortion to competitive dynamics**, so as not to result in a barrier to entry/growth in the market, also for the sake of EU internal market.

***Thank you (also for the questions)!***