

## From Law to Public Health Impact :

# Implementing the Belgian Framework for Improving IAQ in Public Places

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Health  
Food Chain Safety  
Environment



1

2

## Belgium – crash course



Belgian Federal Government

Minister of Public Health

*Frank Vandenbroucke*



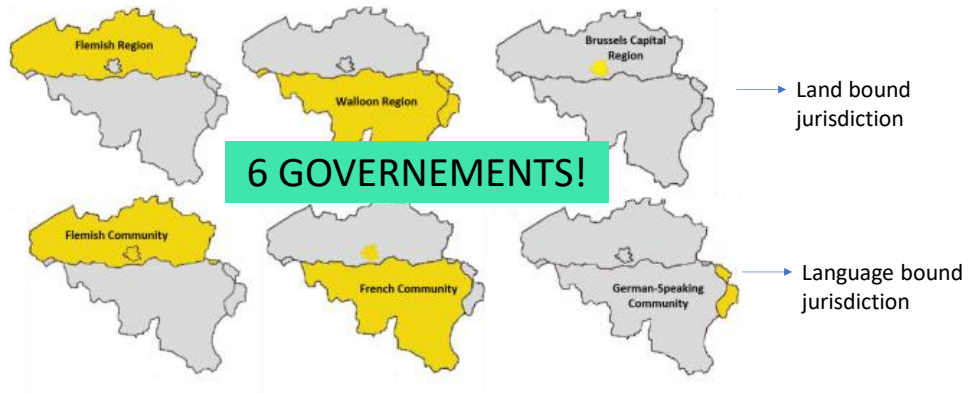
Health  
Food Chain Safety  
Environment

INDOOR AIR QUALITY



2

## Belgium – crash course

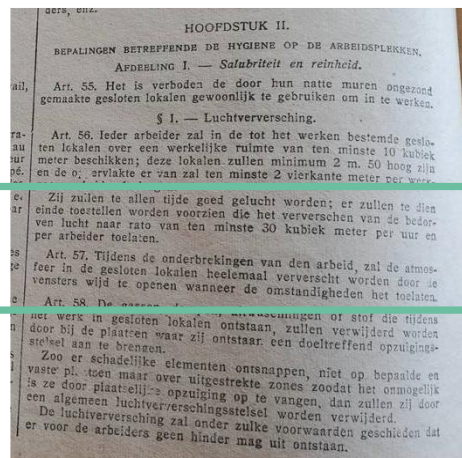


## History



- 1946: Workers rights
  - 30 m<sup>3</sup>/h/worker
- 2026: Employer shall take necessary technical and/or organizational measures to ensure that
  - In a space “where there is a **workstation**”.
  - IAQ requirements
    - Details later!

More on: new vs old buildings, types of ventilation, RH, action plans,... in the CODEX



## Improvement of Public health

# Law on the improvement of indoor air quality in closed spaces accessible to the public

FEDERALE OVERHEIDSDIENST VOLKSGEZONDHEID,  
VEILIGHEID VAN DE VOEDSELKETEN  
EN LEEFMILIEU

[C – 2022/34199]

6 NOVEMBER 2022. — Wet betreffende de verbetering van de binnenluchtqualiteit in gesloten plaatsen die publiek toegankelijk zijn (1)

SERVICE PUBLIC FEDERAL SANTE PUBLIQUE,  
SECURITE DE LA CHAINE ALIMENTAIRE  
ET ENVIRONNEMENT

[C – 2022/34199]

6 NOVEMBRE 2022. — Loi relative à l'amélioration de la qualité de l'air intérieur dans les lieux fermés accessibles au public (1)

## 4 Pillars of the Belgian IAQ law

### Reference Levels

- Based on **scientific** data
- Used to **assess** indoor air quality
- **Public Health norm**

### Encourage to improve

- Measurement of IAQ (e.g. **CO<sub>2</sub> monitoring**)
- **Risk analysis** of spaces, activities, and pollution sources
- Inventory of **ventilation and air purification systems**
- **Action plan** to progressively meet reference levels

### Transparency

- **LABEL**
- Reliable information on IAQ performance
- Clear **communication** towards users and stakeholders
- Supports **informed choices and trust**

### IAQ Platform

- **Knowledge sharing** and guidance
- (Inter) National
- Facilitates implementation of the legislation
- Supports stakeholders with **practical resources**

# Belgian IAQ law

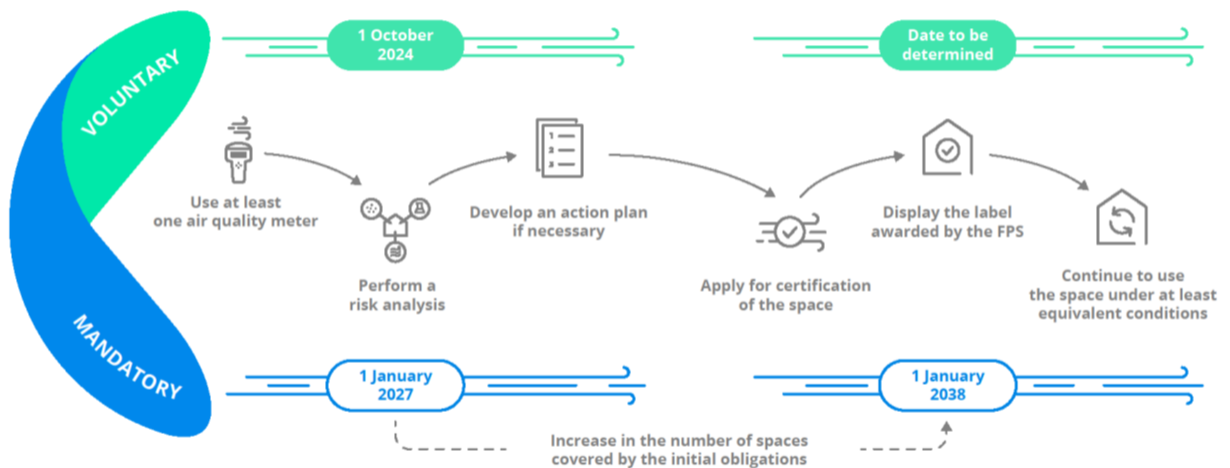
## • Elements of the policy

1. Obligations and responsibilities (installation CO<sub>2</sub> meters, risk analysis, action plan)
2. Reference levels
3. Air purification (marketing, customer info, use outside covid context)
4. Certification and labeling
5. Enforcement of the law
6. Indoor air quality platform

English version of the text available

# 1. Obligations and responsibilities

Note: the phased approach is determined by royal decree, not by the IAQ Law.





## 2. Reference levels

### Reference level A:

- At least 40 m<sup>3</sup>/h per person with outside air
  - and/or 15m<sup>3</sup>/h per person air purification, with at least 25m<sup>3</sup>/h per person to outside air
- Or 900 ppm CO<sub>2</sub>

### Reference Level B:

- At least 25 m<sup>3</sup>/h per person with outside air
- Or 1200 ppm CO<sub>2</sub>

Next step: Adding new reference levels

HEALTH centric

→ PM 2,5 (WHO,2021)

Elements of the policy

1. Obligations
2. Reference levels
3. Air purification
4. Certification and labeling
5. Enforcement of the law
6. Indoor Air Quality Platform

## 3. Air purification

Note: The royal decree is not yet published.



- Need for recognized (European) norms for air purifiers which incorporates following pillars.
  - **Safety** : should be guaranteed for user and installer
  - **Efficiency** : should have a uniform way of determining and communicating
  - **Maintenance** : transparency on the effort and cost before purchase
  - **Installation** : should state the limitations

Until then...

### Elements of the policy

1. Reference levels
2. Obligations
3. **Air purification**
4. Certification and labeling
5. Enforcement of the law
6. Indoor Air Quality Platform

## 3. Air purification

Note: The royal decree is not yet published.





Erkend luchtzuiveringssysteem  
Système de purification de l'air reconnu  
Anerkanntes Luftreinigungssystem

MODEL - MODÈLE - MODELL



REFERENTIE NUMMER  
NUMÉRO DE RÉFÉRENCE  
REFERENZNUMMER

**VIRUS**  
CADR MIN : m³/h - dB(A)  
CADR MAX : m³/h - dB(A)

Santé publique  
Sécurité de la Chaîne alimentaire  
Environnement

Volksgezondheid  
Veiligheid van de Voedselketen  
Leefmilieu



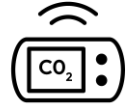
- Legislation for high efficiency purifiers against viruses in aerosol.
  - **Allowed techniques:** (H)EPA filter, ESP with collection, UVC (240-280nm)
  - **Prohibited techniques:** Photocatalisation, Cold plasma, Ozon, Hydrogen peroxide, UVC (outside range 240-280), Ionization without collection
    - With exemption and proof of efficacy and security allowed.
  - Approval needed before entering on the BE market
- List of recognized systems
- Consumer guide

### Elements of the policy

1. Reference levels
2. Obligations
3. **Air purification**
4. Certification and labeling
5. Enforcement of the law
6. Indoor Air Quality Platform

<https://www.health.belgium.be/en/themes/environment/conscious-consumption-circularity/recognition-label-air-purification-systems>

## 3. IAQ monitors



- Need for recognized (European) norms for indoor air monitors for different pollutants.
  - **Correct** : Values show need to be sufficiently accurate
  - **Easy to use** : Needs to be used by general public
  - **Durable** : Needs to be usable for a long time (easy calibrations)
  - **Available to the public** : Reasonable cost
- Legislation on portable and transportable CO<sub>2</sub> meters
  - Direct measurement
  - Calibratable
  - Accuracy in accordance to EN 50543:2011

Until then...

### Elements of the policy

1. Reference levels
2. Obligations
3. **IAQ monitors**
4. Certification and labeling
5. Enforcement of the law
6. Indoor Air Quality Platform

## 4. Certification and labeling

Note: The royal decree is not yet published.

- How will the certification of a space work?
- What qualifications does a certifier need?



Draft label, this may evolve in time.

### Elements of the policy

1. Reference levels
2. Obligations
3. Air purification
4. **Certification and labeling**
5. Enforcement of the law
6. Indoor Air Quality Platform

## 4. Certification and labeling

Note: The royal decree is not yet published.



- Will be determined by Royal Decree:
  - the procedure for approving certifiers,
  - the conditions for approving certifiers to ensure that they have the necessary qualifications,
  - the minimum content of the inspection,
  - the frequency of inspections of closed spaces accessible to the public by certifiers,
  - the way in which the competent authority,
  - the methodology
  - the content of the label,
  - the placement and design of the label, and exemptions from these obligations
  - the costs of the certification system are to be financed.
  - additional regulations concerning the manner and conditions in which certifiers carry out their analyses

**WORK IN PROGRESS**



Draft label, this may evolve in time.

### Elements of the policy

1. Reference levels
2. Obligations
3. Air purification
4. **Certification and labeling**
5. Enforcement of the law
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## 5. Enforcement of the law



- Done by **40** inspectors and controllers in BE
  - The inspection service of the Directorate-General Animals, Plants and Foodstuffs of the FPS Public Health
- Sanctions possible for:
  - Absence of air quality meter, risk analysis, action plan
  - Failure to request the label in a timely manner
  - Failure to operate according to the label
  - Certifier not operating according to provisions
  - ...

### Elements of the policy

1. Reference levels
2. Obligations
3. Air purification
4. Certification and labeling
5. **Enforcement of the law**
6. Indoor Air Quality Platform

## 4. Indoor Air Quality Platform



- The Indoor Air Quality Platform has been set up to improve knowledge of indoor air quality,
  - To support work to improve and prevent risk situations,
  - To provide policy advice both in Belgium and internationally.
- The Platform is also a point of contact to facilitate scientific research into indoor air quality.



**Indoor Air Quality  
PLATFORM**

### Elements of the policy

1. Reference levels
2. Obligations
3. Air purification
4. Certification and labeling
5. Enforcement of the law
6. **Indoor Air Quality Platform**



# *Thank you for your attention*

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Environment