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# Naturally Occurring Asbestos in the asbestos-free European Union approach. Is asbestos exposure prevention being understood correctly?



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# The European Green Deal and asbestos exposure



## The Renovation Wave Strategy

- double annual renovation rates by 2030
- improve health and living conditions for consumers
- increase the number of workers and citizens potentially **exposed to asbestos** while the renovations take place

**Asbestos** - a group of **naturally occurring fibrous minerals** (chrysotile, actinolite, anthophyllite, grunerite, riebeckite, tremolite)

**Type 1 carcinogen agents** regardless of the asbestos mineral species. *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans (2012)*



chrysotile  
Gomsiqe massif, Korthpule outcrop, Albania

# A timeline of asbestos policy (EU in focus)

## Occupational



Image credit: Alamy Stock Photo

- 89/391/EEC, 85/610/EEC directive  
Protection of workers from the risk to exposure to asbestos
- 99/77/EC- Prohibition of chrysotile by 2005
- 2009/148/EC Worker permissible exposure limit (TWA, 8 hours)- 0.1 fibre/cm<sup>3</sup>
- 2020/C 375/01 Hazardous waste in households
- Proposal for 2009/148/EC amendment

## NOA



Tremolite in Parâng on road side  
(Toth & Weisburg, 2012)

1989-1992

1999

2009

2020

2022

**Only in national level:**  
Guidance documents-  
Australia EPA, California  
Mapping projects- California,  
Italy, France, Spain

**2001** Asbestos Airborne  
Toxic Control  
Measure-  
Minimization of  
NOA during  
construction,  
quarrying activities  
California Air  
Resources Board

**2007** Memorandum on  
NOA to be  
addressed in  
California  
Environmental  
Quality Act

**2016** Management of  
Naturally Occurring  
Asbestos (NOA),  
California  
Department of  
Transportation

# Asbestos in our environment

	Solid material/rock	Soil	Air	Sediment	Water
<b>Built-in asbestos</b>	Monitored and removed in a controlled way	No regulation	Properly regulated (including removal activities)	No regulation	No regulation
<b>Naturally Occurring Asbestos (NOA)</b>	mapping outcrops and near surface bodies (no way to remove: all activities like constructions should be completed by monitoring)	Agricultural activity to be controlled and monitored	Regular monitoring if human activities around are expected	Potential redeposition of original solid material to be controlled	Potential transportation to be controlled

!  
To do

# Who takes decisions? Who should be informed?

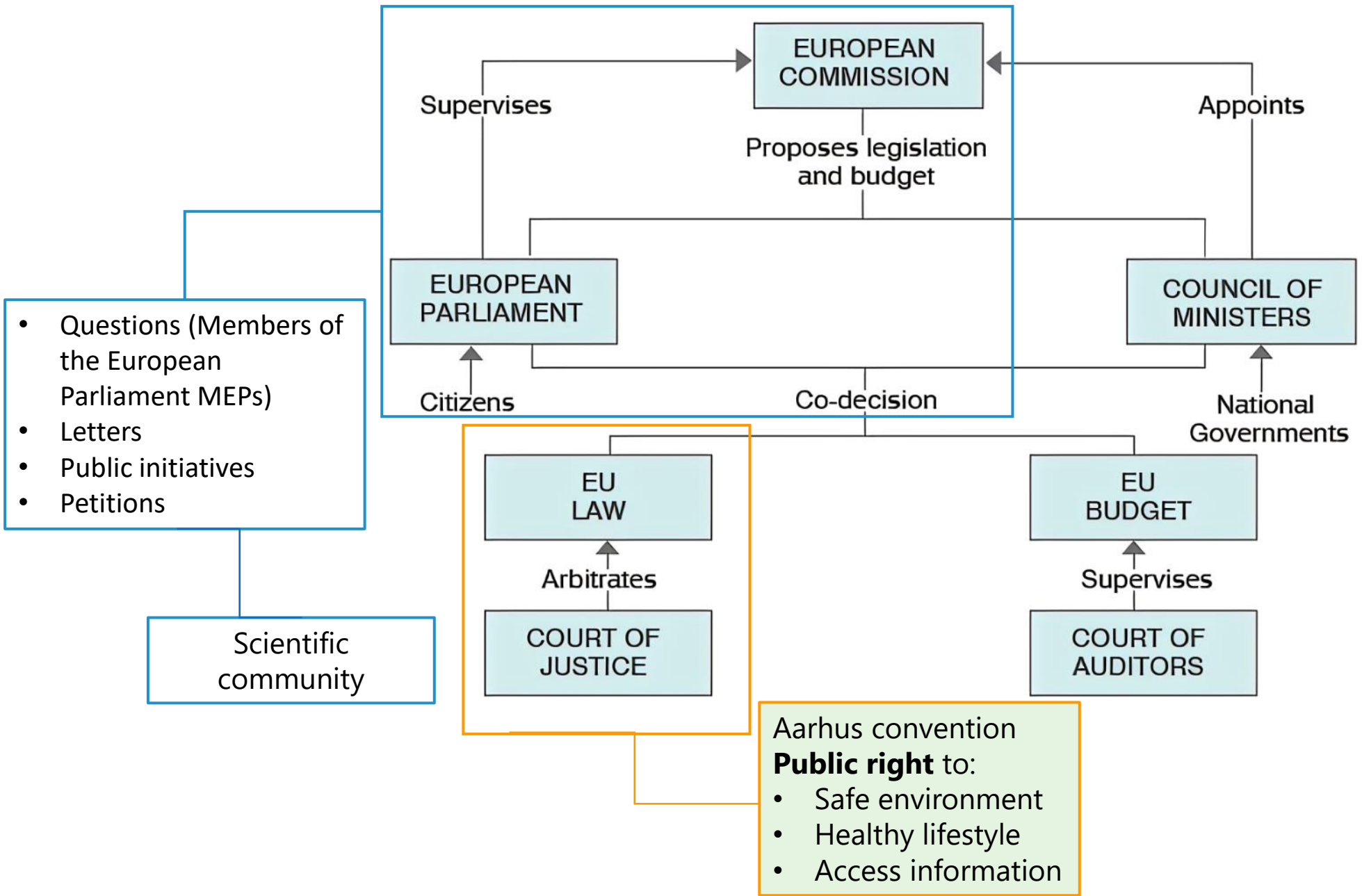
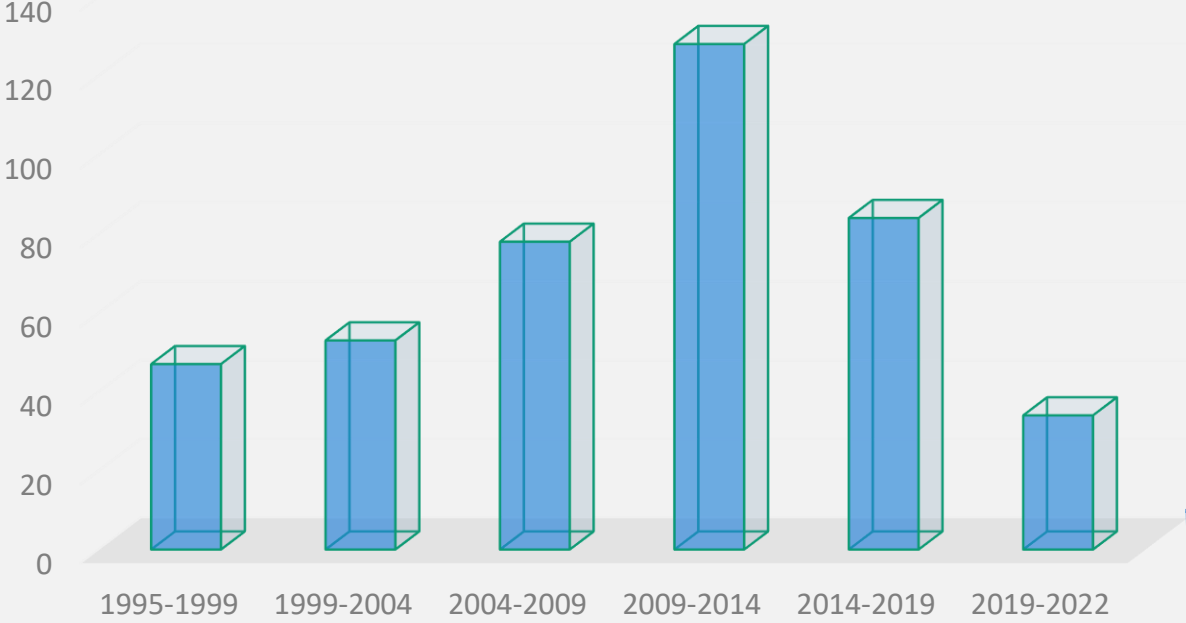


Chart modified after Rattanaseeve, P. 2014 on The structure on EU decision making

# MEPs ask the European commission

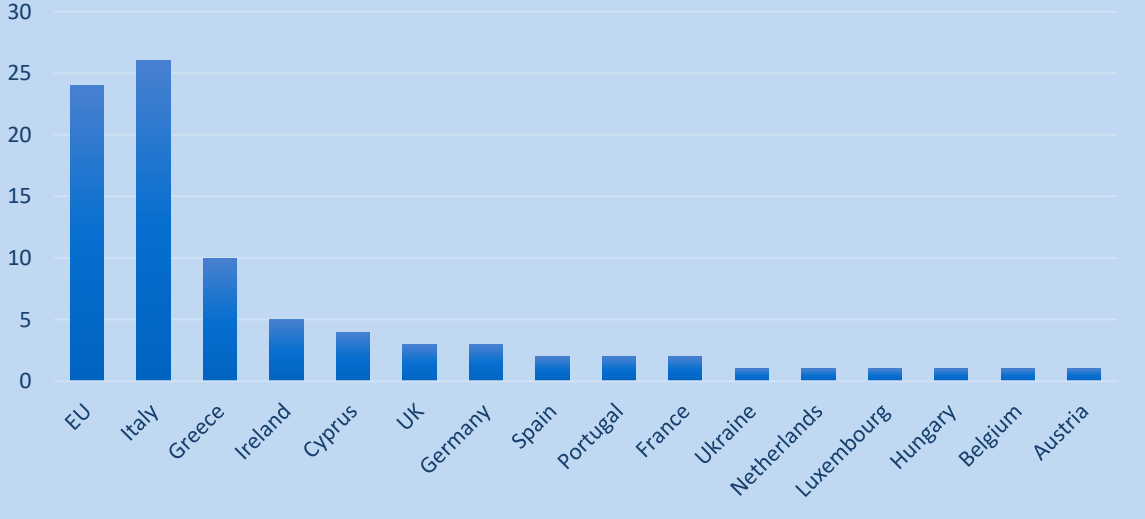
## The number of questions raised in years



425 questions in total  
Time period: February 1995-December 2022  
Highest number of questions between 2009 and 2014 referring mostly to *Regulation Implementation* (4-10 years after the asbestos ban regulation)

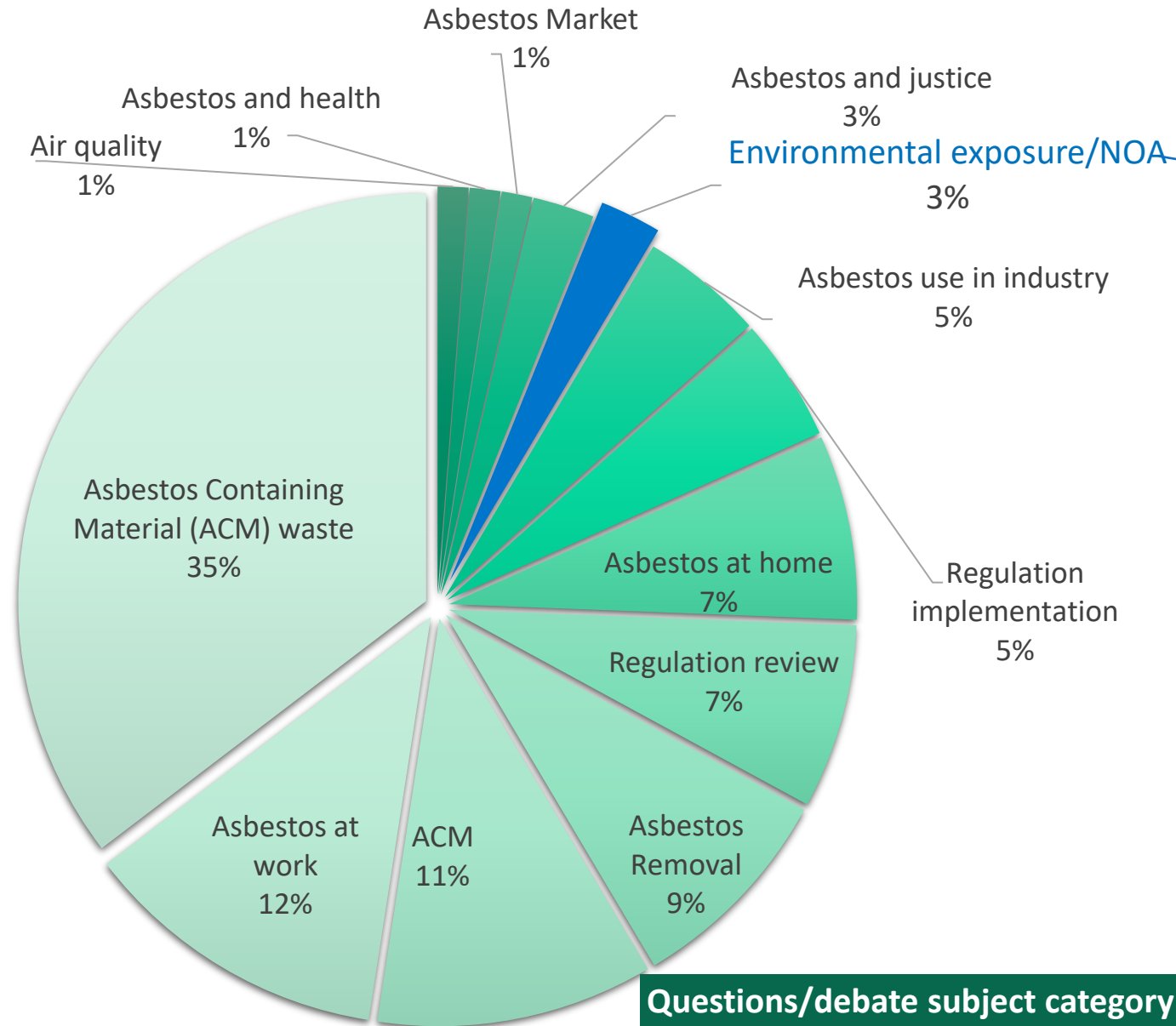
Each question had a subject country  
15 countries were included  
1 category is specific to the European Union level (including all Member States)

## Which country/region was the question raised for?



# MEPs ask the European commission

# The European commission answers



Questions/debate subject category

Total: 425

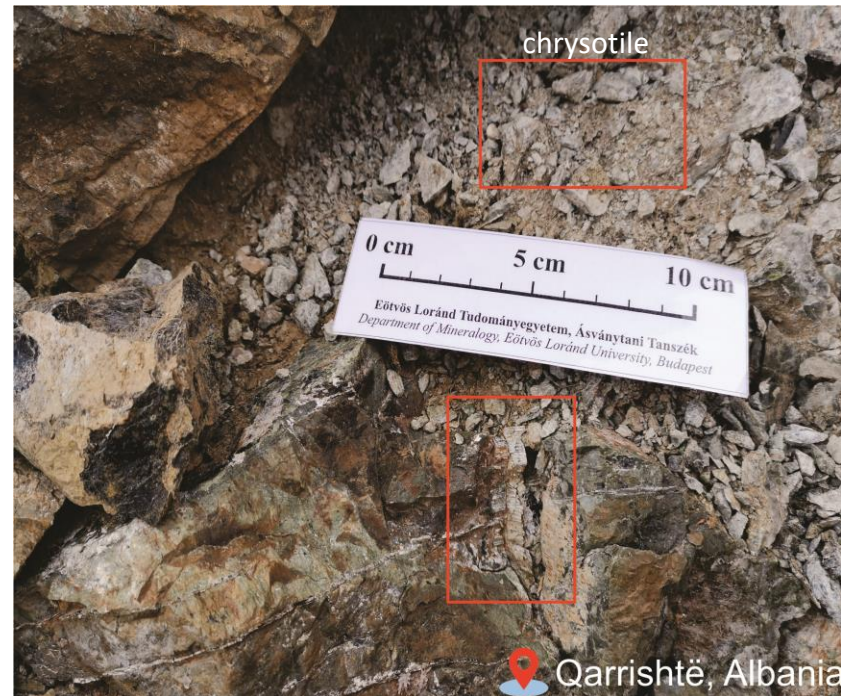
“The matter falls outside the scope of this legislation...” referring to Asbestos at Work directive 2009/148/EC

“Environmental pollution Council Directive 87/217/EEC of 19 March 1987 on the prevention and reduction of environmental pollution by asbestos focuses on pollution control at the level of plants using asbestos or asbestos products. The transport of asbestos waste from such plants is also covered by this directive, but the directive does not cover the transport of asbestos minerals, nor processes directly associated with the mining of asbestos.”



## *Asbestos-free... asbestos let it be Asbestos-free... asbestos let it be*

While we try to remove asbestos containing materials from buildings, **we cannot ban or remove asbestos from the natural environment.** The natural processes will find their way.





# NOA in Europe – possibility for a complete database

The screenshot displays the Europe-Geology web application interface. On the left, there is a sidebar with three filter sections: 'Large deposit', 'Medium deposit', 'Small deposit', and 'Occurrence / Not specified'; 'Commodity group' with options like 'Energy commodities', 'Fertilizer minerals', and 'Iron and ferro-alloys metals'; and 'Commodity' with 'Asbestos' selected. The main area shows a topographic map of Europe with various symbols representing mineral localities. A search bar at the top left contains 'Go to location...'. A toolbar above the map includes 'Zoom', 'Area', 'Path', and 'N North' buttons. The EGDI logo is in the top right, and a 'Privacy & Cookies Policy' button is overlaid on the map. A scale bar at the bottom right indicates 1000 km. At the bottom of the interface, it shows 'ZOOM: Shift + Drag' and 'SELECT: Ctrl + Drag' instructions, along with coordinate systems 'EPSG:3034' and 'EPSG:4326'.

- **Some of the missing localities in the current only database for raw materials in Europe including asbestos** (Karkanis et al., 1995; Hyskaj et al., 2020; Vitale et al., 2013; Apollaro et al., 2010; Iannace et al., 2007)

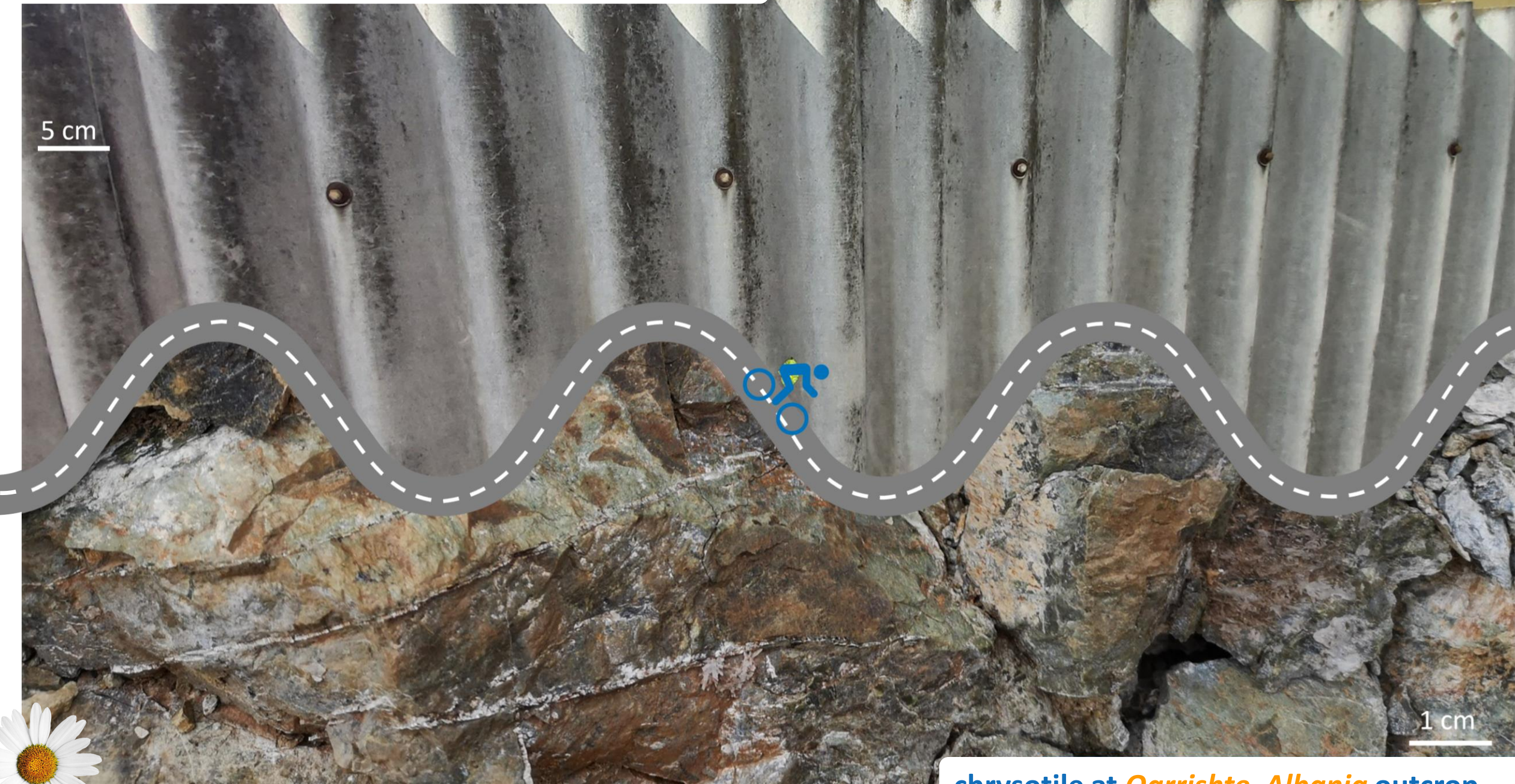
# Take home message

**“In 10 years, the buildings of Europe will look remarkably different.** Buildings will be the microcosms of a more resilient, greener and digitalized society, operating in a circular system by reducing energy needs, waste generation and emissions at every point and reusing what is needed.” *A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, 2020*

**In 10 years, we will still have asbestos around.** What we need to do is prevent unnecessary exposure to hazardous asbestiform minerals by:

- strengthening the management tools to asbestos containing materials
- acknowledging, identifying NOA occurrences and prepare guidelines on
  - land use
  - urban planning
  - risk management
  - mining activities

Asbestos cement slate fence in *Vienna, Austria 2023*



chrysotile at *Qarrishte, Albania* outcrop



**"The Daisy Oracle"** (effeuiller la marguerite, plucking the daisy) is thought to be of French origin, but the evidence is anecdotal.

Plucking the petals of a daisy flower would bring about a desired answer, usually in the context of a joyful game played by girls to determine whether their affection is reciprocated or not.

I bring up this parallelism to remind ourselves that even though a world without asbestos would be ideal, the simplicity of natural processes has shown us that we possess greater power. Therefore, we can work with the known answer to improve our well-being and that of the environment.

**He loves me he loves me not**

Eugenio Zampighi (1859–1944)

## Acknowledgements

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