

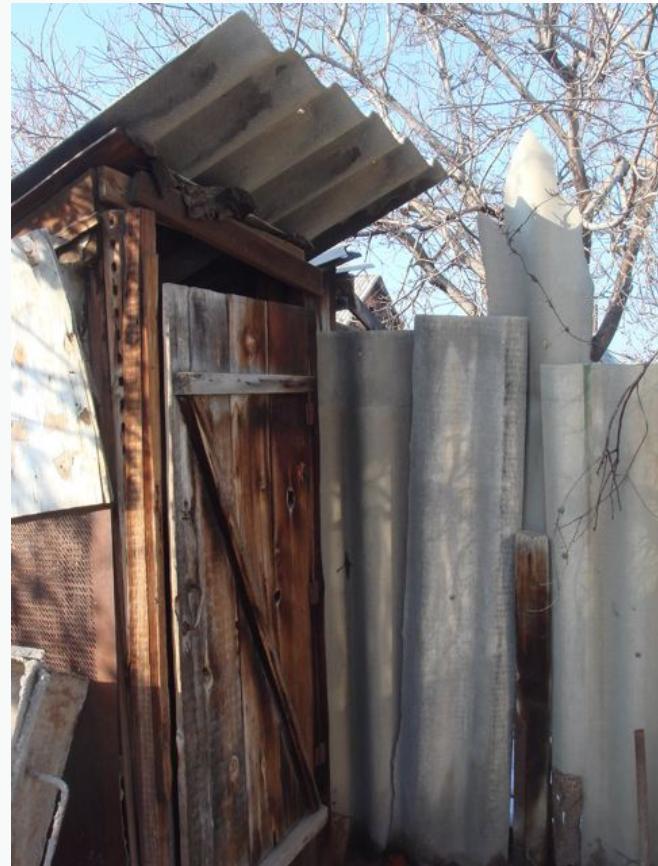
# Asbestos Lessons learned from the EU

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# Ukrainian citizens believe their asbestos is safe

- WECF discovered with shock that NGO partners wanted to use asbestos for ecological construction
- NGOs and the public had been told, that “their” asbestos was safe
- People sawing asbestos slates in their house and garden



Common sight in EECCA:  
asbestos slates used in  
home and garden [www.wecf.eu](http://www.wecf.eu)

# WECF tested chrysotile asbestos

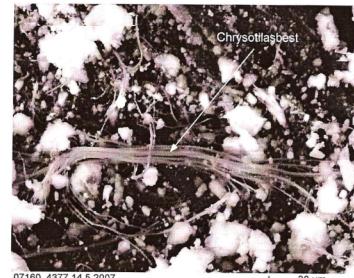
- WECF bought asbestos sample in Almaty, Stepanovka and Garla Mare
- Tested in accredited laboratory in Germany
- The chrysotile asbestos from EECCA region is of cancer-causing type

**IGUTEC**  
INGENIEURGEMEINSCHAFT FÜR  
UMWELTECHNOLOGIEN GMBH

Picture of sample 4376: chrysotile asbestos



Picture of sample 4377: chrysotile asbestos



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Laboratory test of asbestos plates bought in Ukraine

# EECCA asbestos is same as the asbestos forbidden in >50 countries

## Translation of: Test report – IGUTEC – 07160

The investigation of the samples given on order resulted in the following findings:

Sample No.	Place and/or description of the place of discovery	materials type	kind of asbestos	sample contains
4375	Ukraine, Stepanovka, school, roof	corrugated sheet	Chr	<b>asbestos</b>
4376	Rumania, Garla Maria, privat house, roof	corrugated sheet	Chr	<b>asbestos</b>
4377	Kazakhstan, Almaty	flat board	Chr	<b>asbestos</b>

abbreviations: Chr = chrysotile asbestos

Amph = amphibole asbestos

n.p. = no proof of asbestos

**Note:** (In Germany) Only professional companies with a "Sachkundenachweis" according to TRGS 519 are allowed to work with asbestos-containing materials.

The sample No. 4375, 4376 and 4377 contain asbestos fibres with a diameter < 3 µm, i.e. the samples contain lung-current fibres according to WHO definition.

# All types of Asbestos : lethal risk

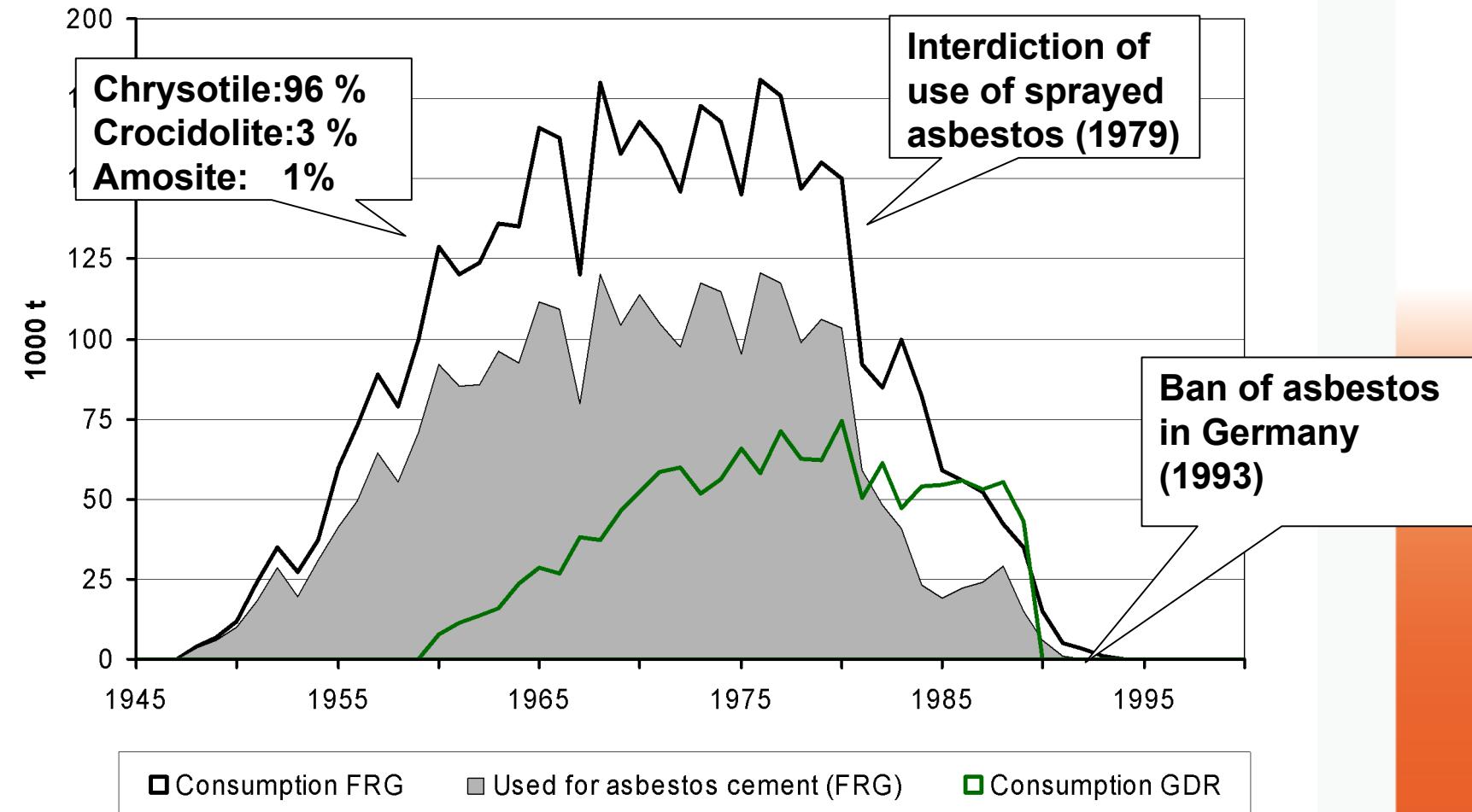
- WHO, IARC and EC have concluded that all forms of asbestos cause cancer, including the chrysotile form produced in Russia and Kazakhstan and unfortunately still widely used in Ukraine and EECCA
- Chrysotile asbestos:
  - asbestosis
  - lung cancer
  - malignant mesothelioma
  - gastrointestinal cancers
  - ovary cancers
- There is no known threshold for safety

# Long Latency 20-30 years

- Early indications that chrysotile might be less dangerous than other forms of asbestos have not held up
- Due to the long latency period of most asbestos-related diseases, phasing out the use of chrysotile asbestos now will result in reducing the burden of disease in several decades
- WHO: 125.000.000 people occupationally exposed to asbestos, including women and children
- ILO: asbestos causes 100.000 deaths globally every year through occupational exposure alone

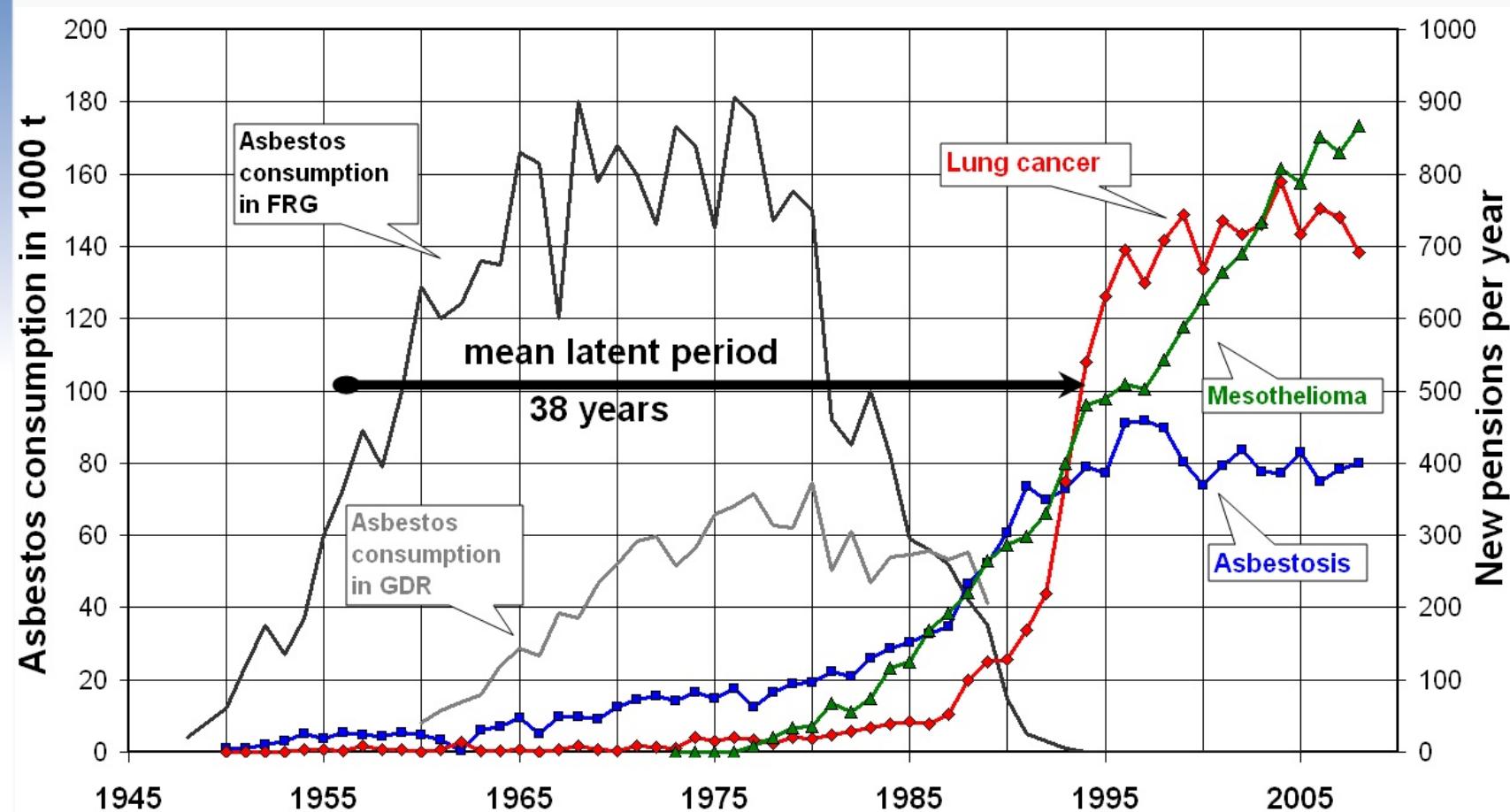
# Use of asbestos in Germany

96% of Use; Chrysotile

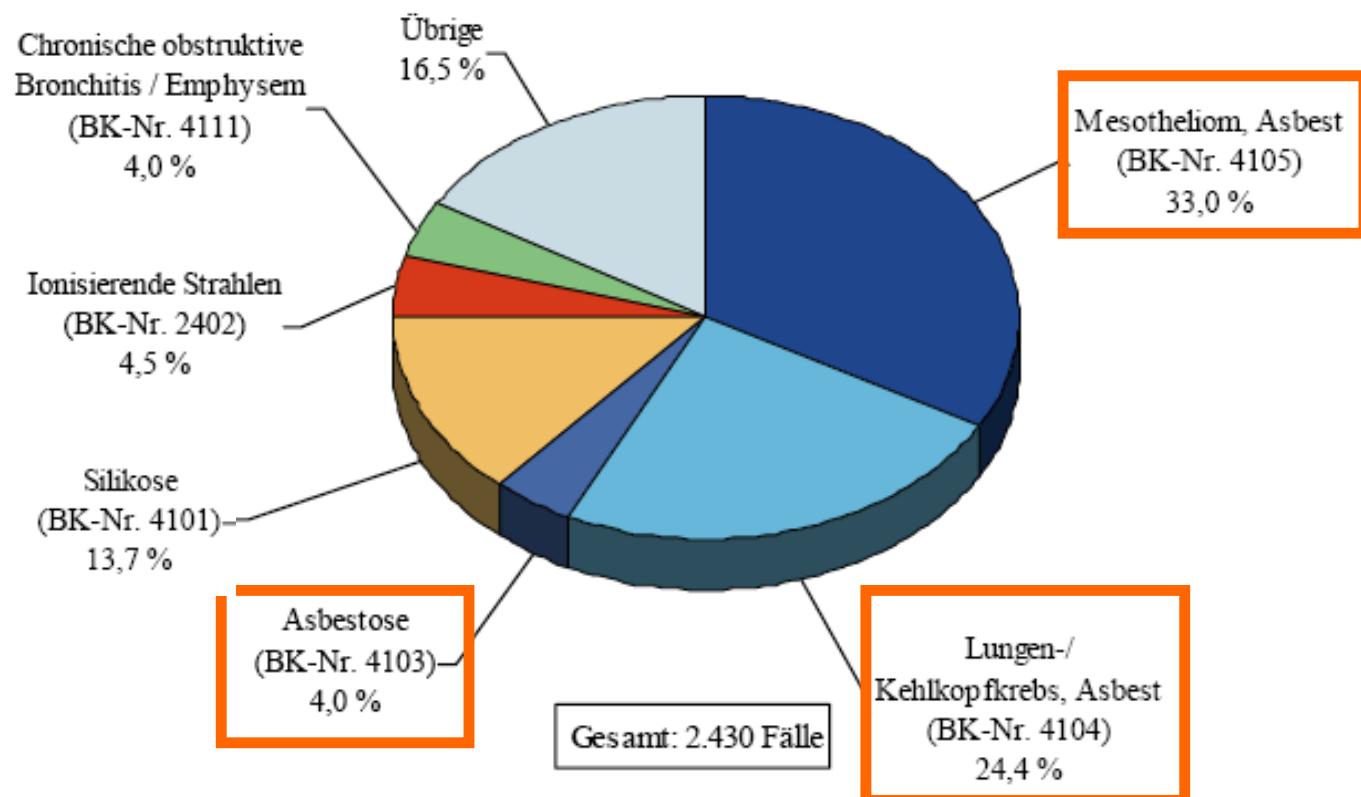


Source: Dr. Markus Mattenkott, BGIA - Institute for Occupational Safety and Health of the German Social Accident Insurance Germany

# Asbestos related occupational diseases in Germany



# Occupational diseases leading to death in 2008 in Germany



Source: Dr. Markus Mattenkott, BGIA - Institute for Occupational Safety and Health of the German Social Accident Insurance Germany

# Asbestos related diseases - Costs per Case in Germany

- **Recipients of a pension in 2008:** 25,958
- **Mean pension per recipient in 2008:** 17,400 US-\$
- **Estimated mean duration  
of pension payment per case:** 13 years
- **Estimated total pension per case**
  - asbestos: 130,000 US-\$
  - lung cancer: 320,000 US-\$
  - mesothelioma: 320,000 US-\$

# Asbestos related diseases - Costs per Case in Germany

• Costs for asbestos related occupational diseases in Germany 1987 - 2008

• all costs: 5,840,000,000 US-\$  
• costs for pensions: 4,840,000,000 US-\$ (83 % of all costs)

• Predicted total costs for asbestos related occup. diseases in Germany (based on assumption that peak is reached in 2010)

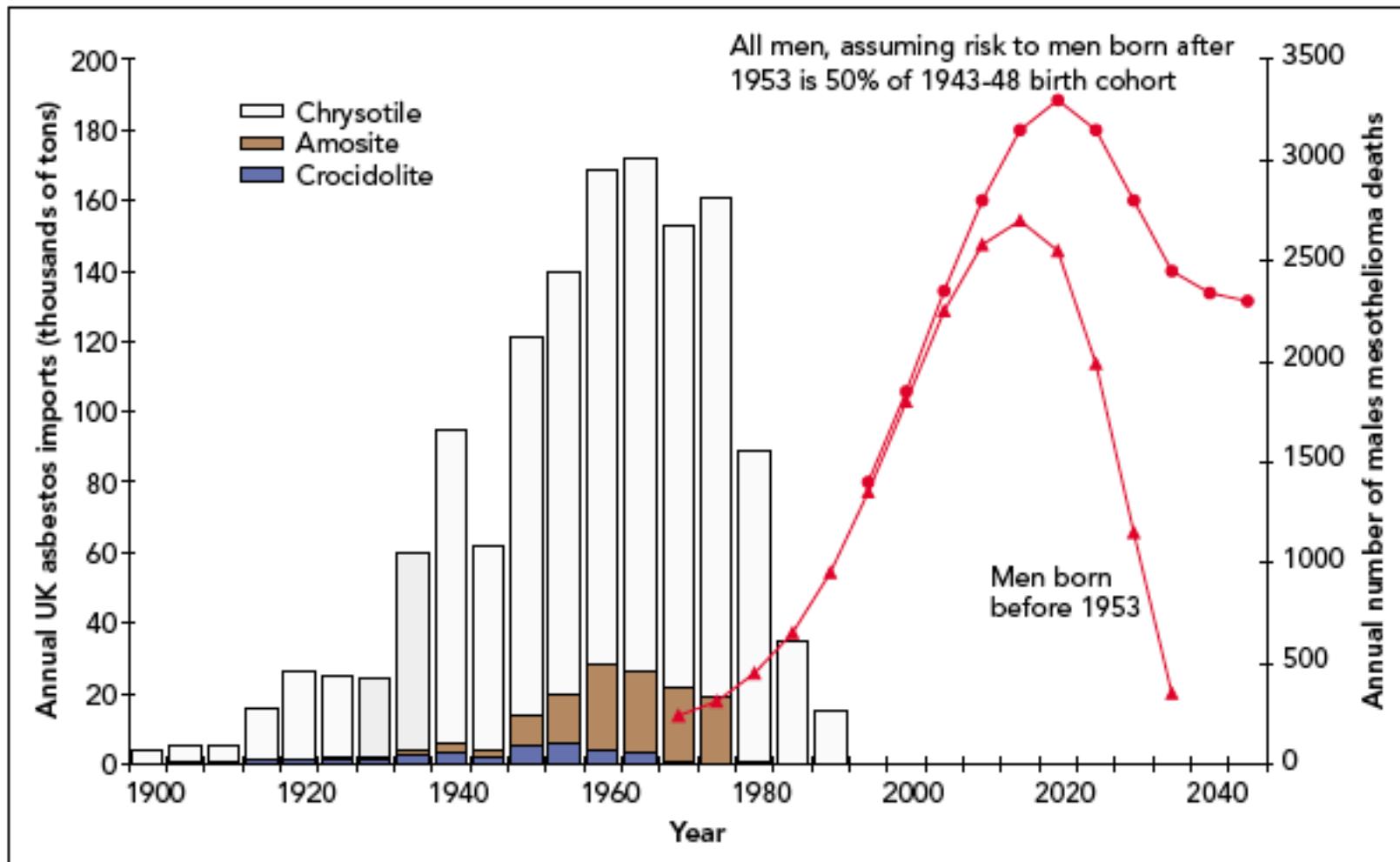
• all costs: 20,000,000,000 US-\$  
• costs for pensions: 17,000,000,000 US-\$

# Further costs from asbestos use

arise from:

- \$ follow up and preventive occupational health checks of workers with past and current asbestos contact
- \$ costs for asbestos removal/abatement in public and private buildings
- \$ uncontrolled current exposure: Health risks as a result of inappropriate handling of still used asbestos products in residential homes and industrial applications

# UK asbestos death among men



and Ukraine?

# Case of the Netherlands

- It was known in 1965 that asbestosis, mesothelioma and lung cancer was associated to chrysotile asbestos
- A ban of asbestos at the work place applied in 1993 and a full ban in 1998
- About 1,4 million tonnes asbestos was used in NL

## Result:

- 52.000 asbestos death in Netherlands (on 15 Mio inhabitants)
- Mesothelioma : dead within 2 years
- Only 1% survives
- All asbestos death are unnecessary

# Case of the Netherlands

## Results:

52.000 asbestos death in Netherlands so far (on 15 Mio inhabitants)

## Cost to Economy:

- **67.000.000.000 Euro**
- **1,5 billion Euro only for medical care**
- **32 million for removal activities**

**-> If asbestos would have been banned in 1965: at least 52.000 victims and 20 billion Euros would have been saved**

# Controlled use is not working

- „Controlled use“ of asbestos products was not demonstrated in the Netherlands or the other EU countries
- Can not be relied on to protect workers' health
- Not an 'alternative' measure to the asbestos ban

# Industry sponsored research and lobbying attempts failed

- Asbestos industry unsuccessfully attempted to influence scientific organizations
- It was brought to World Trade Organization (WTO) to overturn national bans on asbestos: unsuccessfully
- Countries have the right to protect their populations health against hazardous substances

# Unethical Commercial Tactics

- Most asbestos sales are now to developing countries
- Asbestos companies under-price safer, competitive materials by not bearing the costs of health and economic costs their products are causing
- Asbestos industry lures consumers: „their“ asbestos can be safely used
- Authorities can not protect their populations health, imports remain uncontrolled



Indian child on a heap of asbestos dust, from [Russia](#)?

# Asbestos use in EECCA region



Russia and  
EECCA: Roofs of  
Asbestos and  
asbestos waste  
are everywhere

We discovered:

- Schools, hospitals, other public buildings are built with asbestos
- Households use asbestos
- Asbestos waste problem
- Asbestos Industry is dominant
- Scientists and politicians are not aware

# Women and children: affected

Mesothelioma development risks increase sharply

- in the case of long-term exposure to low doses of asbestos comparatively
- exposure to high doses

Cases of mesothelioma cancer:

- Washing clothes of asbestos workers
- Playing as child near asbestos factory
- Living near asbestos factory

Burden for the poor: they are more exposed

# Ukrainian women and children at risk

- Ukraine regulates primary exposure
- However, secondary exposure is effecting millions of women and children in the EECCA region

Therefore, women and children at risk from:

- Houses, schools, playgrounds with asbestos
- Asbestos dust in cities with asbestos factories
- Wives and children of men working with asbestos

# Asbestos Alternatives

There are safer substitutes to chrysotile asbestos

Alternative fibres have been tested to be safer for the human respiratory system

Alternatives include:

- Fibre Substitutes
- Non-fibre substitutes

# Asbestos Alternatives

## Fibre Substitutes

- Natural organic fibre, e.g. Cellulose fibres
- Manufactured organic fibre, e.g. Polyvinylalcohol (PVA) fibre
- Manufactured inorganic fibres (MIF), glass and stone wool with oils and binders added
- Naturally occurring crystalline fibres and other minerals, e.g. Wollastonite

## Non-fibre Substitutes

- Carbonates
- Conventional building materials

# Brazilian cellulose / asphalt roof slates cost less than asbestos



Trata-se de um produto denominado "telha fibroasfáltica", cuja composição consiste de fibras de celulose vegetais saturadas a alta temperatura com betume asfáltico. Demonstrativo a seguir as inúmeras utilizações e características, onde infere dizer que se trata de um produto altamente viável e comercialmente competitivo.

# Hope for Ukraine: Parma Declaration

The Government of Ukraine signed on to “Parma Declaration on Environment and Health”,

12 March 2010

Regional Priority Goal 4, iii:

“.. we will develop by 2015 national programmes for elimination of asbestos-related diseases in collaboration with WHO and ILO”

Transparent information needed !

# WECF asbestos awareness programme

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## Factsheet Asbestos: a silent killer on a global scale

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**Asbestos causes cancer**  
Asbestos is banned in most industrialised countries yet it is the biggest occupational killer worldwide. The International Labour Organization estimates asbestos causes 100,000 deaths globally every year through occupational exposure alone.<sup>1</sup> This is truly a global epidemic with a preventable cause. There is scientific consensus based on conclusive proof that all types of asbestos are hazardous for human health. The International Agency for Cancer Research classifies asbestos as a proven human carcinogen. Asbestos exposure is associated with bronchial carcinoma (lung cancer) and mesothelioma (cancer of the mesothelial linings of the body). In some cases, these diseases were observed even among people with a short-term asbestos exposure. The disease can lie dormant for years after exposure, but once activated, malignant mesothelioma usually result in death of the patient in a short period of time.

**Where is asbestos used?**  
Over 90% of the asbestos mined and sold in the world is chrysotile asbestos. The most common use for asbestos worldwide is in the manufacture of asbestos-cement construction materials such as slates, roofing materials and pipes; over 75% of the chrysotile mined every year is used in the manufacture of asbestos cement products which typically contain 10-15% asbestos (mainly chrysotile). Almost all municipal buildings, housing for economically poorer people in developing countries and economies in transition are constructed with use of corrugated asbestos-cement, as it is cheap and easily accessible. Roofs of schools, kindergar-

**In Ukraine, 95% of all roofs are covered by corrugated asbestos-cement**

tens and hospitals are covered by corrugated asbestos-cement (see Fig. 1, 2, 3). In Ukraine, for example, 95% of all roofs are covered by corrugated asbestos-cement.<sup>2</sup>

**Who is at risk: asbestos everywhere**

The main health risk is from inhalation of asbestos fibres in the air. Asbestos fibres are present nearly everywhere with greater concentrations in urban areas, though levels are typically low compared to other airborne particles. According to the data of the Agency for Toxic Substances and Disease Registry (USA), in rural areas the concentration of asbestos fibres in the air constitutes 0.03 – 3 fibre/m<sup>3</sup>.<sup>3</sup> In urban areas the content of asbestos in the air is 3 – 300 fibre/m<sup>3</sup>, while closer to asbestos mining or processing enterprises it can be up to 2000 fibre/m<sup>3</sup> or more, representing a severe risk to human health.

**125 million people exposed, including children**

The World Health Organization estimates that currently 125 million people are being occupationally exposed to asbestos. The risk group includes workers who are engaged in repairs or reconstruction works in buildings with asbestos-containing materials, or demolition of such buildings, as well as stoners, installers, car mechanics, etc. Lung carcinomas and mesotheliomas may develop through secondary exposure, for example through wives or other family members coming into contact with

Chemicals

[www.wecf.eu](http://www.wecf.eu)

Thank you  
for your attention

