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# Further assessment of the impact of REACH on occupational health

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# The purpose of REACH

- **Protection of human health and the environment**
- Increased competitiveness, transparency, integration, promotion of non-animal testing
- Prevention of fragmentation of the internal market
- Human health protected by reducing:  
environmental exposures  
workplace exposures

# How will REACH impact on workplace exposures ?

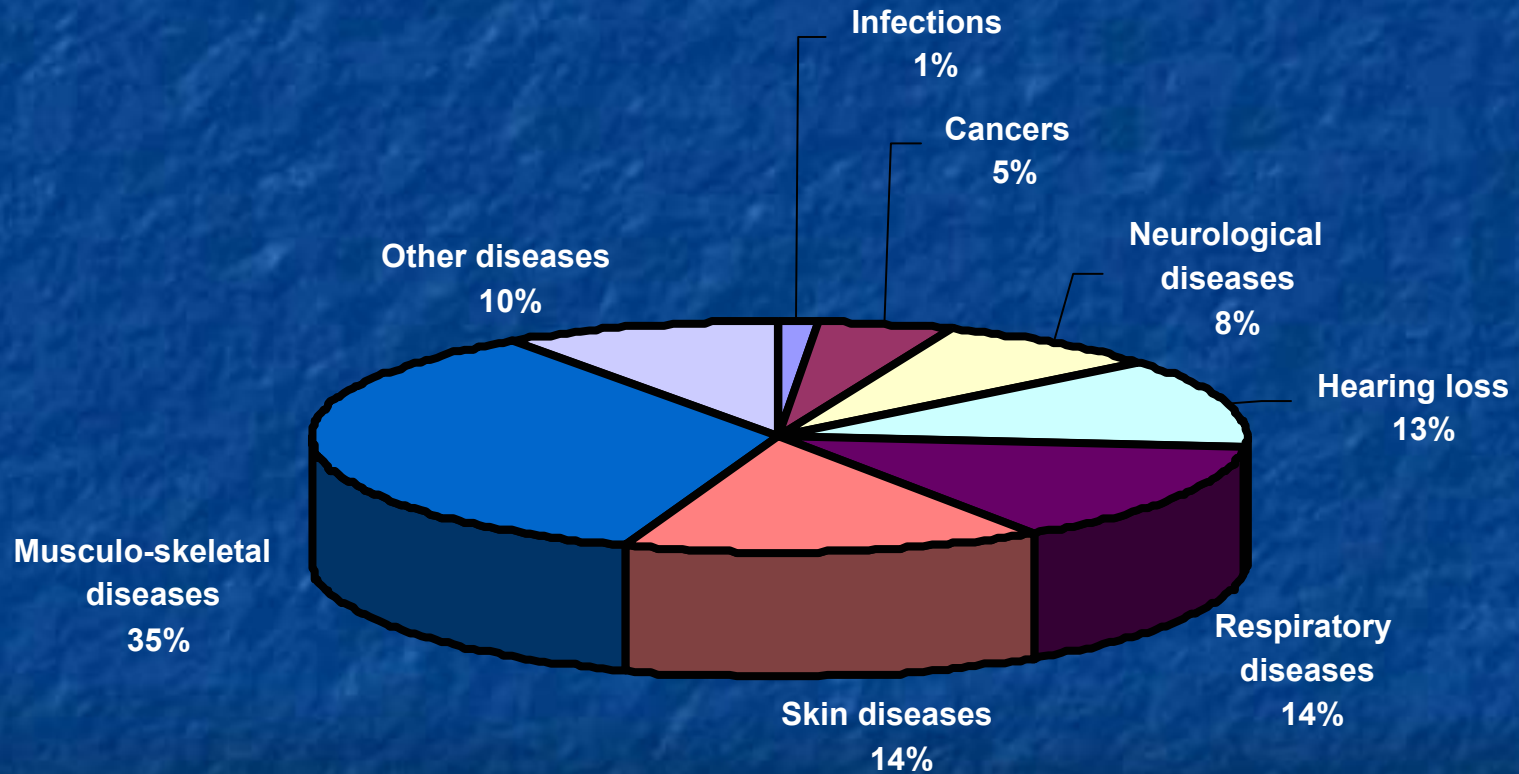
- Manufacturers and importers
  - Registration
  - Chemical Safety Report
  - Authorisation of Very High Concern substances
- Downstream users
  - Use of CSR, SDS and feedback
- Distributors' duties (SDS)
- Employers: worker protection legislation

# Previous studies

- Costs: CEC Extended Impact Assessment
  - €2.8-5.2 billion over 15 years
- Occupational health benefits:
  - RPA €18-35 billion over 30 years
  - Danish government: similar results
- ETUI-REHS
  - 18-30% of major occupational disease groups recognised in EU are chemical-related



# Recognised occupational diseases in the EU-15



# Method of work

- Reanalyse earlier RPA study
- Focus on early benefits of REACH
- Estimate cases of occupational lung and skin disease in EU
- Estimate proportional preventable under REACH
- Derive new costs per case
- Calculate benefits over early implementation period (using RPA study model)

# Timeline

- December 2004: work commenced
- March 2005 : preliminary report presented at ETUC conference
- June 2005 : draft final report
- July 2005 : validation seminar with RPA Ltd, DG Env, DG Empl, DG Entr and BIAG
- September 2005 : final report

# How many cases of occupational skin and lung disease in the EU ?

- Previous estimates based on social protection (compensation) statistics
  - Not all workers covered: <30% excluded
  - No consistency of definition
  - Many restrictive rules
  - No consistent level of disability
  - Procedures deter claims
- Only cases due to unknown or unspecified substances included in RPA estimate as preventable with REACH



# A more accurate method of estimating preventable numbers

- Self-reporting surveys ask people whether they have work-related conditions: Eurostat and European Foundation
- Population studies look at how many cases are attributable to work
- Combined methods may work best
- Case analysis shows whether cases could be prevented by REACH

# Incidence of REACH affected asthma (/m/a)

Compensation stats	4-175 (EU15=35)
Registries	37-43
Self-reporting (ELFS, ESWC)	200 -1000
Attributable cases	200-400
Combined (Finland)	>400
<b>ESTIMATE</b>	<b>400</b>
Proportion of cases affected by REACH	50%

# Incidence of REACH affected COPD\* (cases per million per year)

\*chronic obstructive pulmonary (lung) disease

Compensation stats	Not reliable
Self-reporting (ELFS – 300K)	130
PAR method (Balmes – 15%)	500
ESWC (Prev 3%)	3000
<b>ESTIMATE</b>	<b>500</b>
Proportion of cases affected by REACH	10%

# Incidence of REACH affected occupational skin disease(/m/a)

Compensation stats	68 (EU15)
Registries	129-800
HSE Community study	3800
ESWC (P=6%, Duration 5 years)	12000
<b>ESTIMATE</b>	<b>400</b>
Proportion of cases affected by REACH	50%



# Cost analysis methods

- Direct costs
  - Costs of treating the conditions
- Indirect costs
  - Production losses
- Value of lost health

Based on published data

Relevance and quality varies by condition

# Cost summary

Condition	Aggregate annual cost
Asthma	€4,800 - €21,000
COPD	€2,337 - €13,651
Dermatitis	€1,888 - €12,938

# Are some cases more severe than others ?

- Standard definitions used for COPD and asthma
  - Evidence that many cases are not recognised
  - Disclosure and registration a problem
- Wide range of severity for dermatitis
  - Estimate used is at the low end of the range

# Are we dependent on subjective reports ?

- The Labour Force Surveys and European Survey of Working Conditions give higher figures than social protection systems
  - Strong evidence now that they underestimate the burden of disease
- Population surveys give higher rates



# Are these cases preventable under REACH ?

- Many well recognised causes of occupational asthma and dermatitis do not have accurate data sets on their effects
- Improving use of many chemicals would reduce the burden of disease
- Lack of accurate information on the constituents of industrial chemicals is a major obstacle to control

# Upper or lower estimates ?

- Estimates are sensitive to the assumptions made
  - 4-6 x range for costs
  - Wide range for incidence of skin disease
  - 2 x for burden of disease related to work
  - Narrow range of estimates for disease due to chemicals that will be affected by REACH
  - Different assumptions about which chemical exposures will be controlled under REACH
  - We assume the effectiveness of REACH

# Numbers and costs

	RPA	Our study
Asthma	275-3680	40,000 € 12,900
COPD	€ 1,180	10,000 € 7,994
Skin	1,350-12,000 € 640	40,000 € 7,413

# Conclusions:

- REACH direct costs: € 2.3 billion over 11 years
  - REACH benefits for occupational skin and respiratory diseases **only** : € 0.66-6.2 billion over ten years (mid-point € 3.5 billion)
- ▶ REACH is clearly an opportunity to reduce the number of chemical-related occupational diseases and the associated costs for both industry and society