Lessons from the City of Vienna and the WIDES Database

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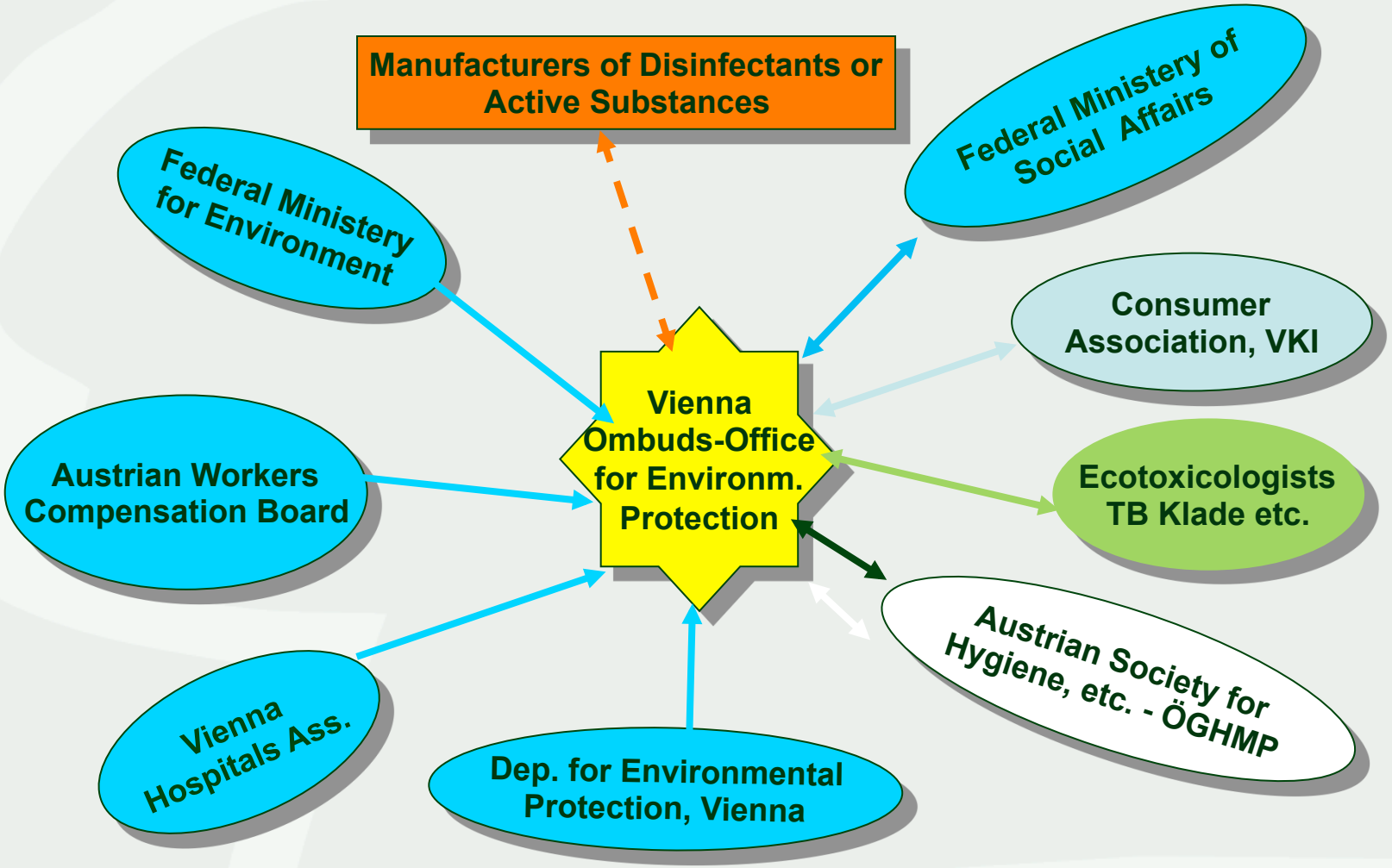
WEBINAR
Promoting Safer Disinfectants in the
Global Health Care Sector
Thursday 23 April 2020 | 14:30 - 17:00

ÖkoKauf Wien (Ecobuy Vienna) - Programme for Green Public Procurement

- In 1998 the Vienna City Administration decided to purchase ALL its goods and services according to ecological considerations.
  For this purpose the programme „ÖkoKauf Wien“ was implemented.
  (Vienna´s Budget: ~ € 5 billion per year)
- All Results, as eco-criteria lists, position papers and Web tools are published on the website: http://www.oekokauf.wien.at
- By executive decree, these criteria lists are binding for all departments of the Vienna City Administration over the course of public procurement and tendering.

Participants of the „EcoBuy Vienna" Working Group „Disinfection"



Also HCWH - Look up all Cooperation Partners at www.wides.at/en !

Our Theses, when we started

- The use of disinfectants in hygiene risk aereas is indispensable.
- Several disinfectants show relevant impacts on health and the environment.
- Disinfectants (with the same application field, efficacy and spectrum of activity) show relevant differences in their toxicological profiles that justify substitution measures.
- It is possible to identify those products with the lowest impact on health and environment, despite a lack of data, complex composition and diverse dilution rates.
- Disinfectants with the lowest impacts are affordable.

OUR MAIN GOAL was SUBSTITUTION of the most toxic products

Reduction of possible risks of disinfection measures for health and the environment to a minimum, by carefully selecting those disinfectants with the lowest hazard potential from the market supply.

BUT a lot of disinfectants are sold as concentrates. Depending on the specific application the dilution rate changes and also differs between the products.

That´s why the information in Safety Data Sheets do not provide enough basis to carry out comparisons of the diluted products “ready to use”.

This makes substitution of disinfectants difficult. That´s why we created a Database to compare products at the needed dilution rates.

The WIDES Database is industry-independent user-friendly and without charge.

It includes

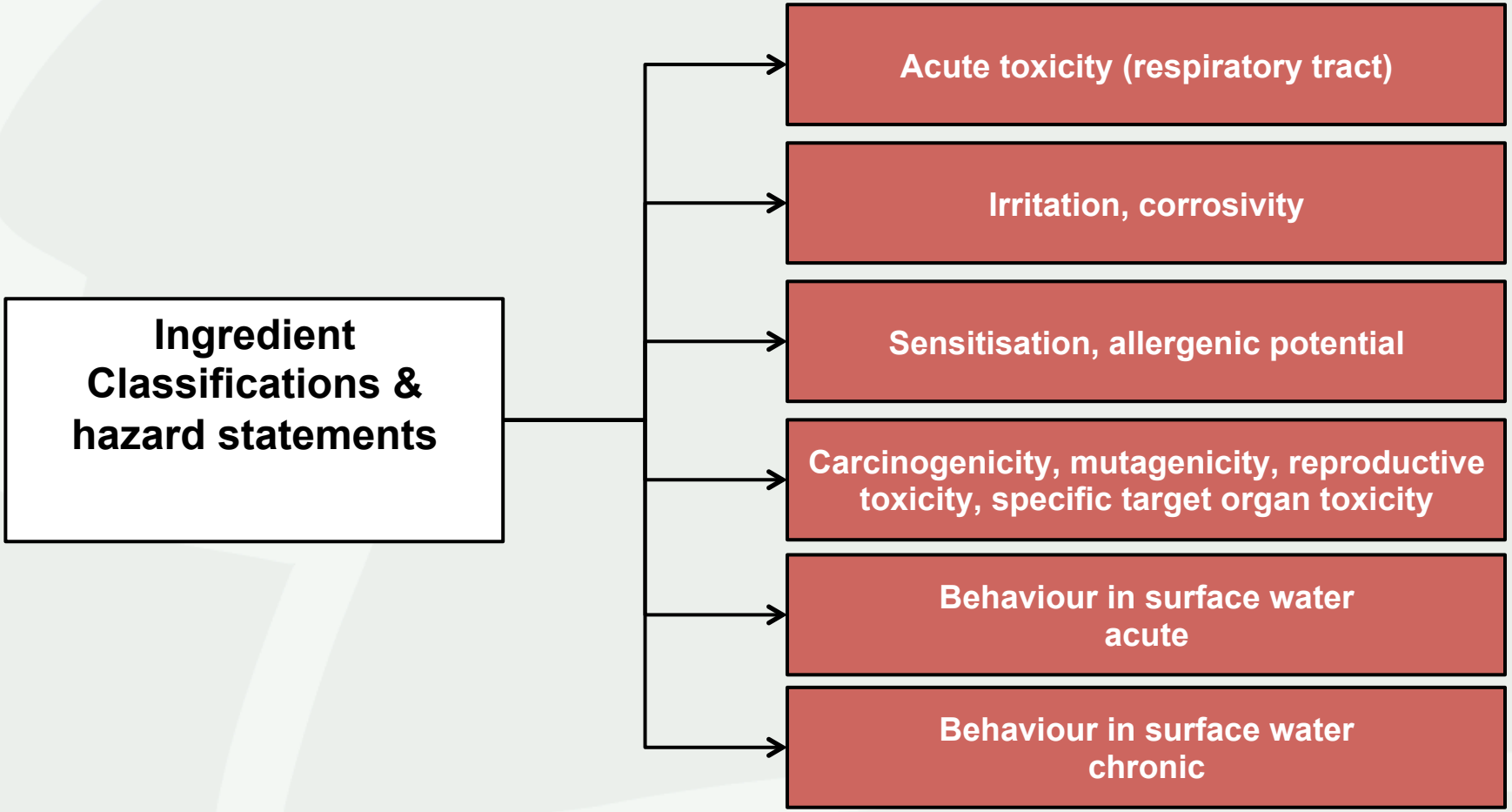
human- and ecotoxicological data on > 200 ingredients of disinfectants, as antimicrobial substances, surfactants, solvents, etc. including source references.

Data regarding the composition, INDEPENDENTLY CERTIFIED spectrum of activity, applications and material compatibility of > 300 disinfectants for surfaces, instruments, laundry, dishes, hands and skin. Mainly from manufacturers' data .

An evaluation scheme to compare human- and ecotoxicological properties of the ingredients of the most important disinfectants available on the Austrian market.

German and English Training Videos and Flyers www.wides.at and www.wides.at/en

Categorization of Adverse Impacts



Rules for the Assessment of Ingredients

Assessment-Number (hazard potential)	Acute toxicity (respiratory tract)	Irritation and corrosivity	Sensi-tisation, aller-genic potential	CMR effects & chronically toxic properties	Behaviour in surface waters acute	chronic
7 (very high ++)					H400 (M10000)	H410 (M1000)
6 (very high +)	H300,H310, H330			H340, H350 H360	H400 (M1000)	H410 (M100)
5 (very high)	H301, H311, H331 + H314 EUH032	H314 (1A)	H334	H372	H400 (M100)	H410 (M10)
4 (high)	H301, H311, H331, EUH029, EUH031, EUH070, H370	H314 (1B, 1C) H318, H281	H317	H341, H351, H361, H362	H400 (M10)	H410 (M1)
3 (moderate)	H302, H312, H332, H371	EUH071		H373	H400 (M1)	H411
2 (low)	H304, H336	H315, H319, H335, EUH066				H412, H413
1 (no)	Based on available data (e.g. animal studies) the hazard potential is negligible.					
?	A hazard cannot be excluded based on contradictory or insufficient data for an assessment.					

Assessment of Active Substances

Assessment of all ingredients, integrated in the WIDES Database:
www.wien.gv.at/wuawides/internet/Inhaltsstoffsuche/Bewertungen

Substance: Glutaraldehyde (CAS 111-30-8)

Intended use: antimicrobial agent

Data source classification: REACH registration dossier

	Acute toxicity (respiratory tract)	Irritation and corrosivity	Sensitisation, allergenic potential	CMR effects & chronically toxic properties	Behaviour in surface water acute	Behaviour in surface water chronic
Applied H-statement resp. data set	H331 + H314 (Skin Corr.1B)	H314 (Skin Corr. 1B)	H334	Based on available data (REACH dossier) hazard potential can be excluded	H400	H411
ANo (Hazard potential)	5 (very high)	4 (high)	5 (very high)	1 (no)	3 (moderate)	3 (moderate)

Comparative Product Assessment in the WIDES

Compared disinfectants	Acute toxicity (respiratory tract)	Irritiation, corrosivity	Sensitisation, allergenic potential	Carcinogenicity, mutagenicity, reproductive toxicity, specific target organ toxicity	Behaviour in surface water acute	Behaviour in surface water chronic	Flammability (only for flammable products)
A							
B				?			
C						?	
D							

Consulting Activities using the WIDES Database

Since 2010 we consult hospitals, kindergardens, schools, official swimming pools and further Viennese institutions by selecting safe disinfectants - using the WIDES Database www.wides.at

Examples for Substitution

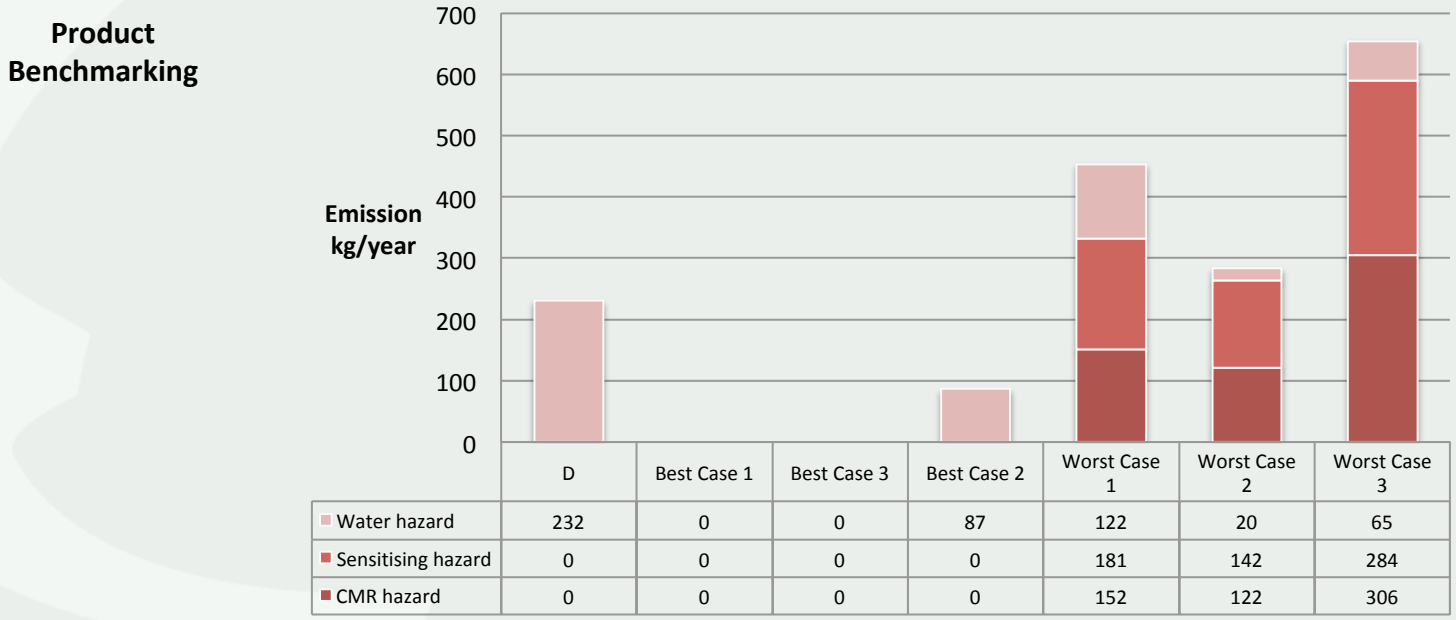
In Viennese schools antimicrobial soaps were replaced with ordinary soap.

In our official swimming pools the use of a disinfectant with an ingredient with CMR properties could not be substituted. But the concentration could be reduced by 50%. After some time, the manufacterer changed the formulation and could phase out Trisodiumnitriltriacetate.

The department for Health Service (MA15) changed the guidance for the selection of effective disinfectants. The use of „aldehydes“, which had been recommended since 1995, was explicitly not recommended any more since 2014. The assessment in the WIDES Database played a key role for this decision.

1995: www.wien.gv.at/gesundheit/strukturen/hygiene/pdf/hygienearchiv-nr09.pdf
2014: www.wien.gv.at/gesundheit/strukturen/hygiene/pdf/hygiene-nr9.pdf

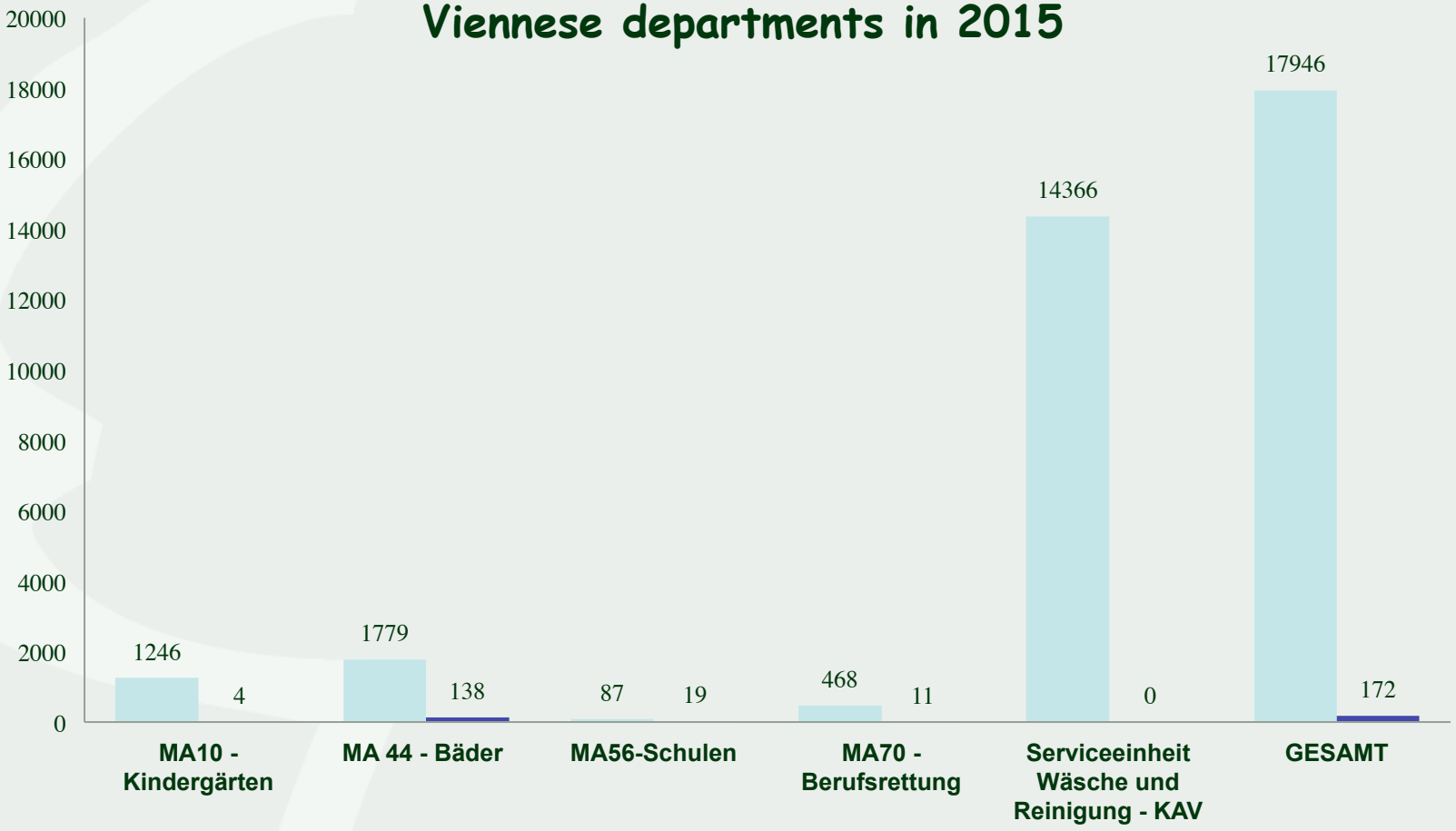
Product Benchmarking Example - Result



	D	Best Case 1	Best Case 3	Best Case 2	Worst Case 1	Worst Case 2	Worst Case 3
Water hazard	232	0	0	87	122	20	65
Sensitising hazard	0	0	0	0	181	142	284
CMR hazard	0	0	0	0	152	122	306

Provisional conclusion: The use of product D generates an emission of 232 kg substances of very high concern per year. There are products available for the same application and with the same efficacy which emit 0 kg substances of very high concern.
A substitution should be taken into consideration but does not appear to be urgent (distance to worst case products is substantial).

MONITORING the disinfectants used in Viennese departments in 2015



Blue: Additional emissions in kg/year, if the worst products from the market would be used.
Black: Potential for substituion in kg/year, if the best products from the market would be used.

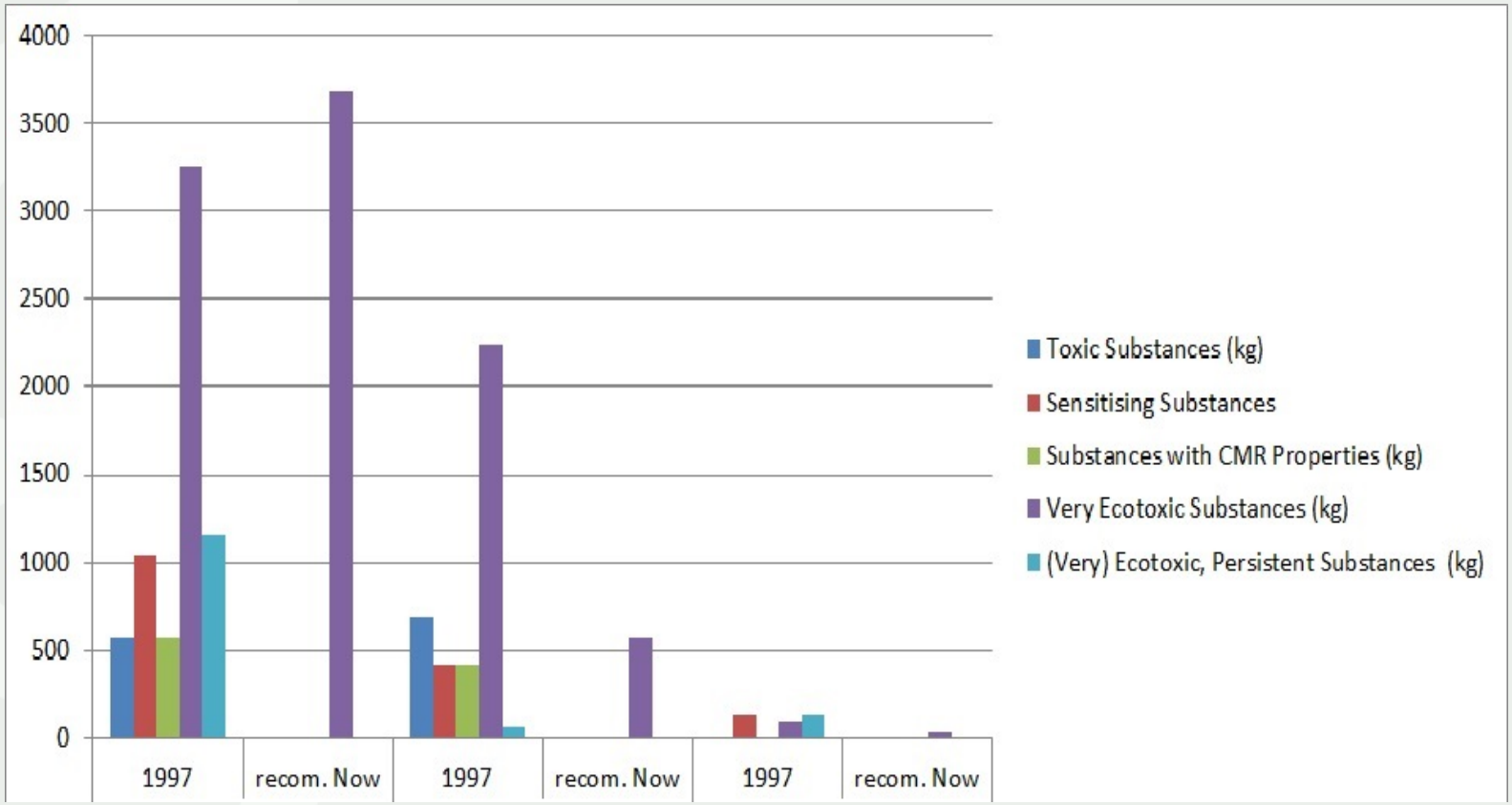
List of Recommended Disinfectants of the Vienna Hospital Association using (also) the WIDES Database

Persons responsible for hygiene measures in the Viennese Hospitals Association created a performance specification for a number of applications of disinfectants. These specifications - including criteria such as quantity, packaging size, spectrum of activity, and absence of aldehydes - were made part of a public tender.

The proposals received were ranked both by price and by considering the ecological and health-related impacts according to the WIDES assessment.
Low price products with a good ecological and health ranking were identified and a list of recommended, low-price disinfectants was created.

The Viennese Hospitals Association now takes this list into consideration.
(Actually about 90% of the used disinfectants are from this list.)

Achieved Reduction of Hazardous Chemicals by using the WIDES Database



Analysis showed that all chemicals with allergenic, toxic, teratogenic, (potentially) carcinogenic and very ecotoxic chemicals with long lasting effects to aquatic life could be phased out of routine disinfection of surfaces, instruments and hands by using the disinfectants, that are on top of the recommendation list.

Using the WIDES database to protect pregnant employees

- The Austrian Labour Inspectorate made a DECREE about hand disinfectants that may be used by pregnant employees.
- The WIDES is used to select products that fulfill the criteria.
  Händedesinfektion und Beschäftigungsverbot § 4 Abs. 2 Z 4 MSchG
- The decree resulted in a strong increase of the use of perfume-free products with low hazardous potential.

Who uses the WIDES database?

Its use is binding

for the Vienna Hospital Association

for Kindergardens, Schools and Baths of the City of Vienna

Its use is recommended by

- the Austrian Action Plan für Sustainable Procurement
- the global NGO „Health Care without Harm“
- the Austrian Labour Inspectorate (Austrian Decree about Hand Disinfectants for Pregnant Employees)

Publications by WHO and ILO, EU-Commission, ICLEI and now: EU-OSHA

CONCLUSIONS

The WIDES Database provides ALL users of disinfectants with useful information, even at global scale.
(BECAUSE the listed active ingredients cover a significant proportion of those used worldwide, and typical formulations of disinfectants are similar worldwide.) English training videos facilitate use!!! (Look at: www.wides.at/en)

ALL disinfectant manufacturers wishing to have their products included in the WIDES Database are welcome, if they meet some basic criteria, specified on the website.

„The dose makes the poison.“ That´s why it´s useful not only to phase out the most hazardous chemicals, but to also consider the concentration of all relevant chemicals to select the safest products.

QUESTION TO YOU:
DO YOU SEE SYNERGIES WITH YOUR WORK?

Thank You!

German Website www.wides.at
English Website www.wides.at/en

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