Pollutant Release and Transfer Register – Important Tool for management of POPs

Tsakhkadzor (Armenia), 31 May 2011

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Pollutant Release and Transfer Register - PRTR

- How it works
- How it can be used by NGOs and other stakeholders
- Examples of PRTRs
- International context – Relations to international conventions

PRTR

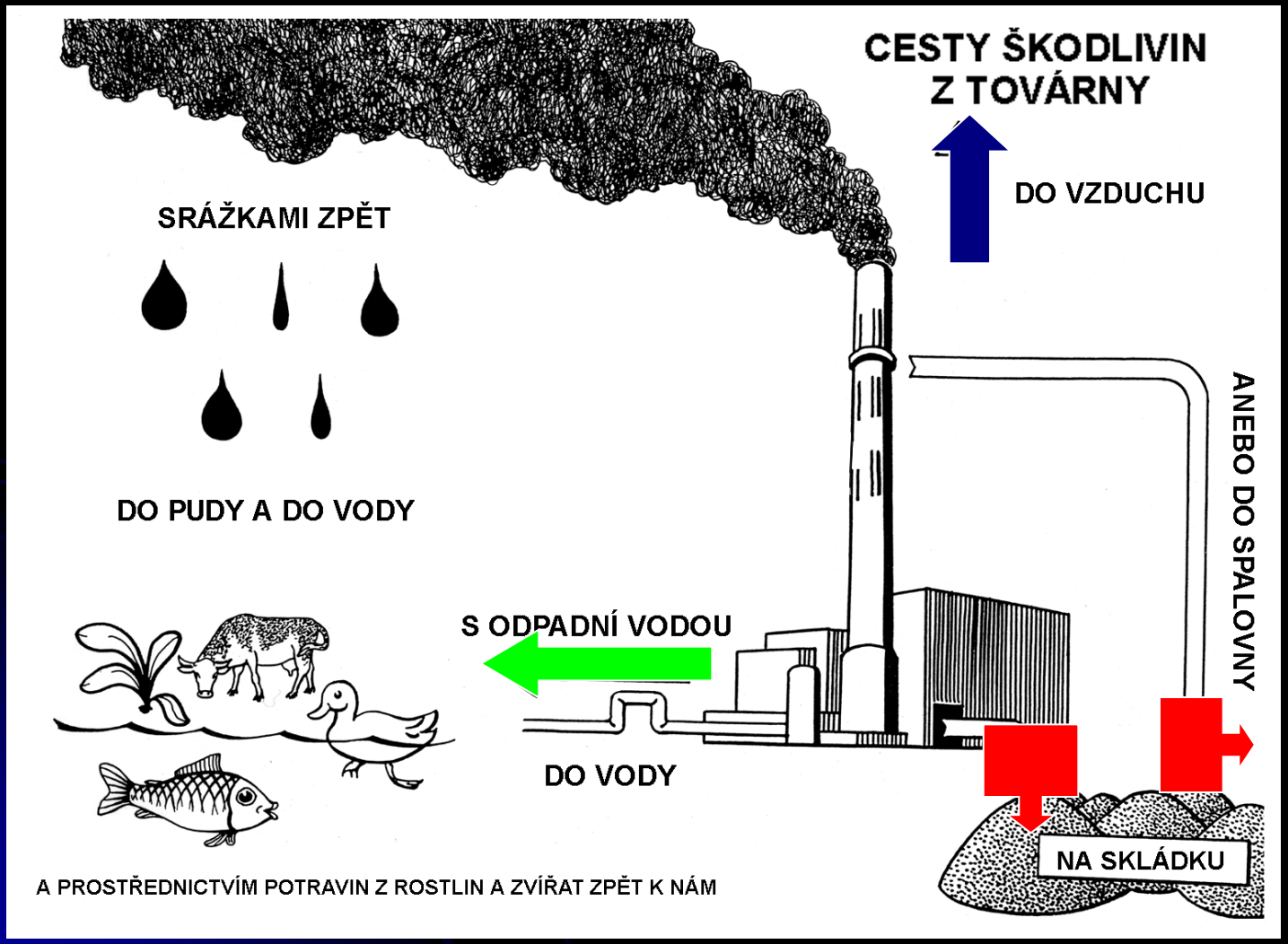
Database of chemical releases and transfers from individual facilities across the country

Good PRTR:

- Chemically specific
- Covers all industry sectors and is specific on each facility releases and transfers
- Accessible to public (internet)
- Every year reporting
- Includes accidential releases
- Covers waste stream (chemically specific reporting on wastes)
- Includes on site as well as off site transfers

PRTR in pictures

Flows covered by the Czech PRTR



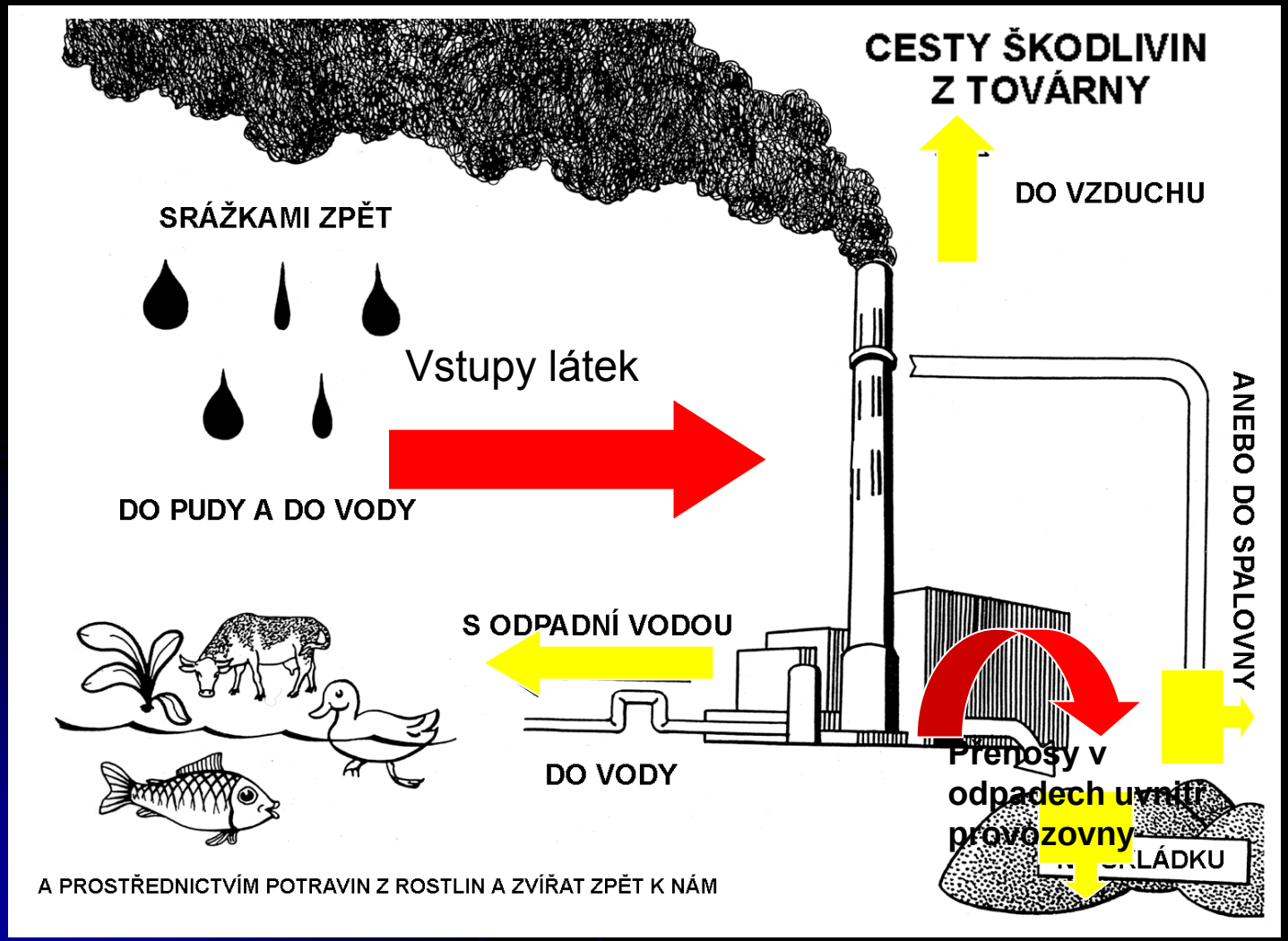
Releases to:
Air
Water
Soil

Transfers in:
Waste waters
Wastes

Accidential releases

PRTR in pictures

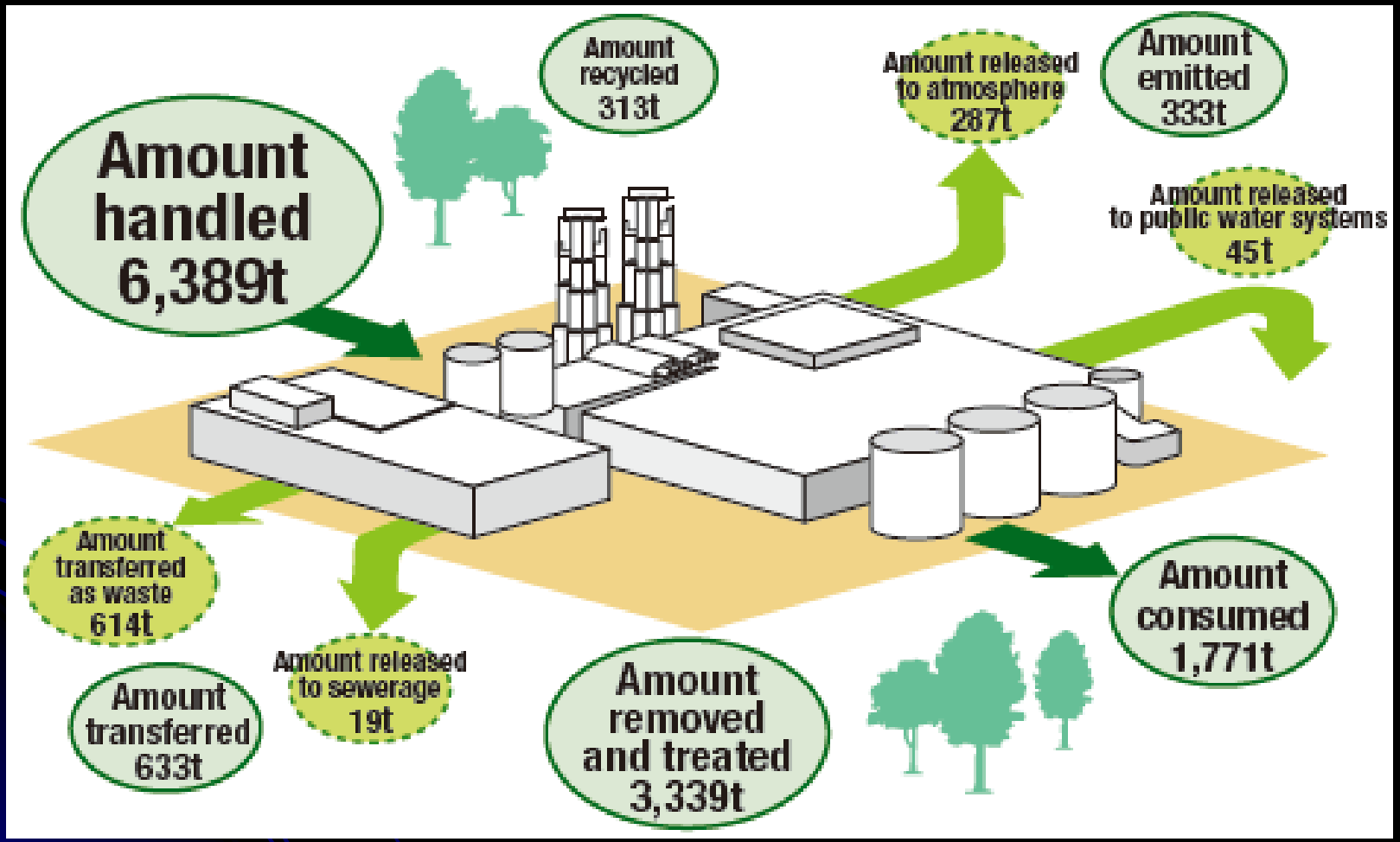
Flows NOT covered by the Czech PRTR



Flow in;
Chemicals used for production

On site transfers

PRTR in pictures



PRTR - chemicals

- **Heavy metals**
- **Volatile Organic Compounds (VOC)**
- **Persistent Organic Pollutants (POPs)**
- **Greenhouse gases**
- **Acid rain gases**
- **Some specific pollutants – non chemically specific (e.g. PM_{10})**
- **Ozone Depleting Substances (ODS)**
- **Pesticides**
- **Chemicals with great impact on water ecosystems**
- **Carcinogens, Mutagens and Reprotoxics (CMRs)**

PRTR – chemicals - thresholds

Chemicals	Czech Republic	E-PRTR	Canada	USA	Scotland	Switzerland
Hexachlorobenzene	10	10	0	4,5 (10 pounds)	1	10
PCDD/PCDF	0,0001	0,0001	0	0,0001****	0,00001	0,001
PCB	0,1	0,1	-	4,5 (10 pounds)	0,1	0,1
PCB in WHO TEQ	-	-	-	0,0001****	0,00001	-
PAU	50	50	50*	45,4 (100 liber)	1*****	50
Mercury	10	10	**	4,5 (10 pounds)	1	10
Cadmium	10	10	**	0,1%******	1	10
Dichloromethane	1000	1000	***	0,1%******	1000	1000
Tetrachloroethylene	2000	2000	***	0,1%******	100	2000
Vinyl Chloride	1000	1000	***	0,1%******	1000	1000
PM_{10}	50000	50000	500	-	1000	50000
$PM_{2,5}$	-	-	300	-	1000	-

History

1978 – first PRTR in New Jersey – 155 chemicals, 7000 reporting facilities

1986 – TRI and RTK in U.S. federal law – following Bhopal accident

1991 – UK

1993 – Canada

2002 – Czech Republic

PRTRs

Toxic Release Inventory (TRI) – USA

http://www.epa.gov/cgi-bin/broker?view=USCH&trilib=TRIQ0&sort=_VIEW_&sort_fmt=1&state=All+states&county=All+counties&chemical=All+chemicals&industry=ALL&year=2009&tab_rpt=1&fld=RELLBY&fld=TSFDSP&_service=oiaa&_program=xp_tri.sasmacr.tristart.macro

European PRTR (E-PRTR)

http://prtr.ec.europa.eu/

OECD – PRTR Task Force

http://www.oecd.org/env_prtr_rc/

Kanada – Pollution Watch (NGO site)

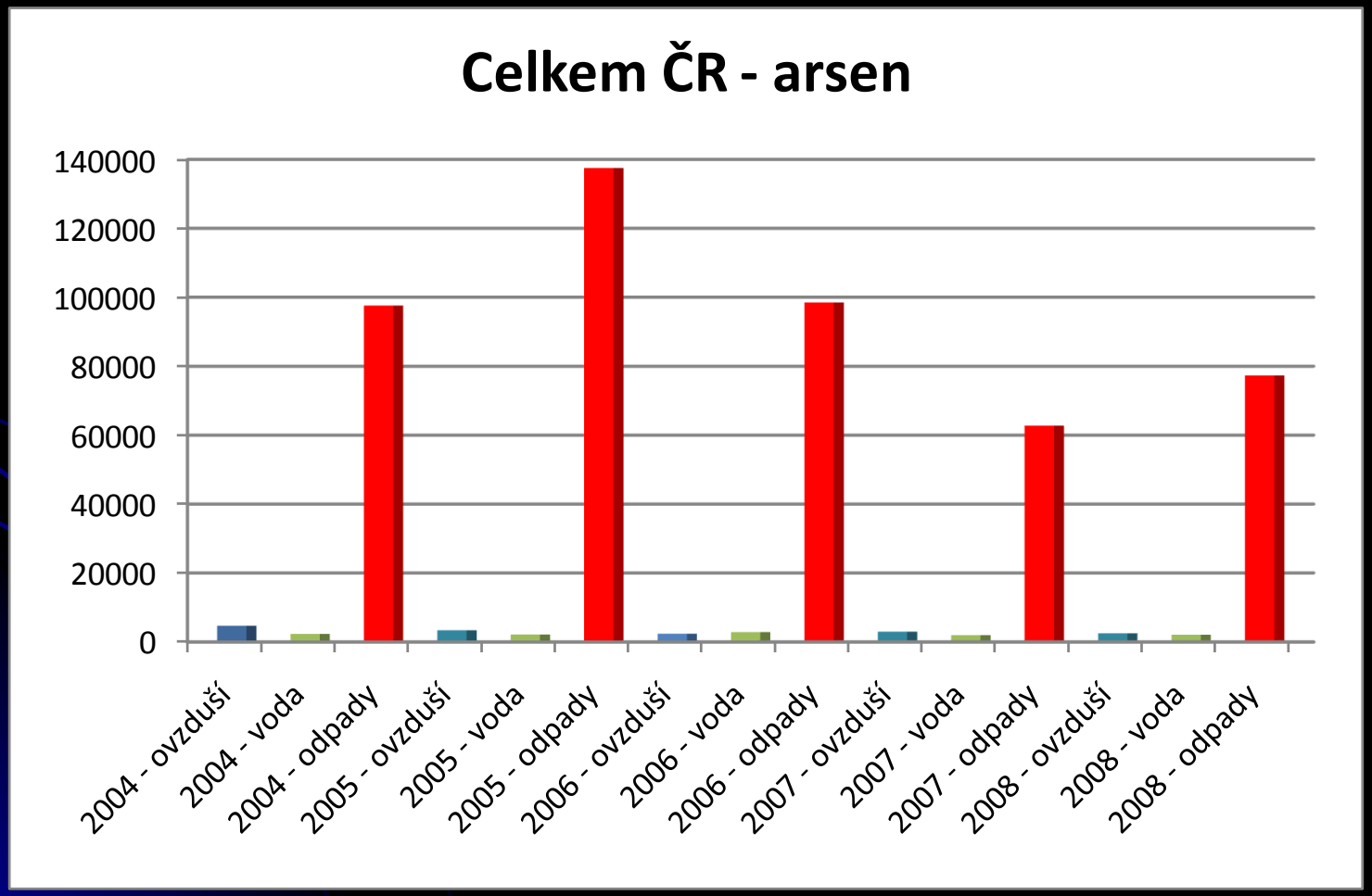
http://www.pollutionwatch.org/

Waste incinerator Liberec – Dioxins (PCDD/Fs) balance

- Rather model of PRTR for one facility:
- Air emissions: 3% PCDD/Fs
- Waste transfer – slag: 3% PCDD/Fs
- Waste transfer – fly ash: 94% PCDD/Fs
- Examples of PCDD/Fs waste transfers reported per facility: MWI – 8 g TEQ/y, HWI – 30 g TEQ/y
- Total air emissions: 178 g TEQ/y
- PCDD/Fs in wastes are not measured regularly
- Waste residues from waste incinerators are often declared as products

Examples of information we can obtain from PRTR

Arsenic in air releases, water releases and wastes transfers (Cezch Rep.)



PRTR
Integrated Release Inventory

Parameters

Zadané parametry vyhledávání

Ohlašovací rok:	2009
Druh úniku/přenosu:	Úniky do ovzduší, Úniky do vody, Úniky do půdy, Přenosy v odp. vodách, Přenosy v odpadech
Typ úniku/přenosu:	Běžný
Metoda zjišťování:	C, M, E
Vybrané látky:	Všechny látky
Seskupit podle:	Organizací a provozoven

Souhrnné údaje

Počet provozoven: **1**
Počet látek - úniky do ovzduší: **1**
Počet látek - úniky do vody: **0**
Počet látek - úniky do půdy: **0**
Počet látek - přenosy v odp. vodách: **12**
Počet látek - přenosy v odpadech: **8**

Data summary

Data

Za hodnotou úniku/přenosu je uvedena metoda zjišťování: C - výpočet, E - odhad, M - měření.
V případě odpadů je navíc uvedeno určení odpadu (R,D): R - recyklace, D - odstranění.

Releases Transfers

Organizace/provozovna	Úniky do ovzduší [kg/rok]	Úniky do vody [kg/rok]	Úniky do půdy [kg/rok]	Přenosy v odp. vodách [kg/rok]	Přenosy v odpadech [kg/rok]
Spolek pro chemickou a hutní výrobu, akciová společnost					
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Celkový organický uhlík (TOC) (jako celkové C nebo COD/3)	0	0	0	246433 [M]	0
Fenoly (jako celkové C)	0	0	0	125 [M]	1795 [E][D]
Fluoridy (jako celkové F)	0	0	0	3540 [M]	0
Halogenované organické sloučeniny (jako AOX)	0	0	0	7292 [M]	34937 [C][D]
Hexachlorbenzen (HCB)	0	0	0	0	184440 [C][D]
Hexachlorbutadien (HCBD)	0	0	0	0	66091 [C][D]
Chloridy (jako celkové Cl)	0	0	0	16526200 [M]	0
Chrom a sloučeniny (jako Cr)	0	0	0	222 [M]	0
Nikl a sloučeniny (jako Ni)	0	0	0	78 [M]	0
Olovo a sloučeniny (jako Pb)	0	0	0	29 [M]	0
Pentachlorbenzen	0	0	0	0	7070 [C][D]
Rtuť a sloučeniny (jako Hg)	33 [M]	0	0	21 [M]	656 [C][D]
Tetrachlorethylen (PER)	0	0	0	25 [M]	12603 [C][D]
Tetrachlormethan (TCM)	0	0	0	26 [M]	0
Xyleny	0	0	0	0	4719 [E][D]
Zinek a sloučeniny (jako Zn)	0	0	0	310 [M]	0

PRTR – top-ten polluters - carcinogenic compounds

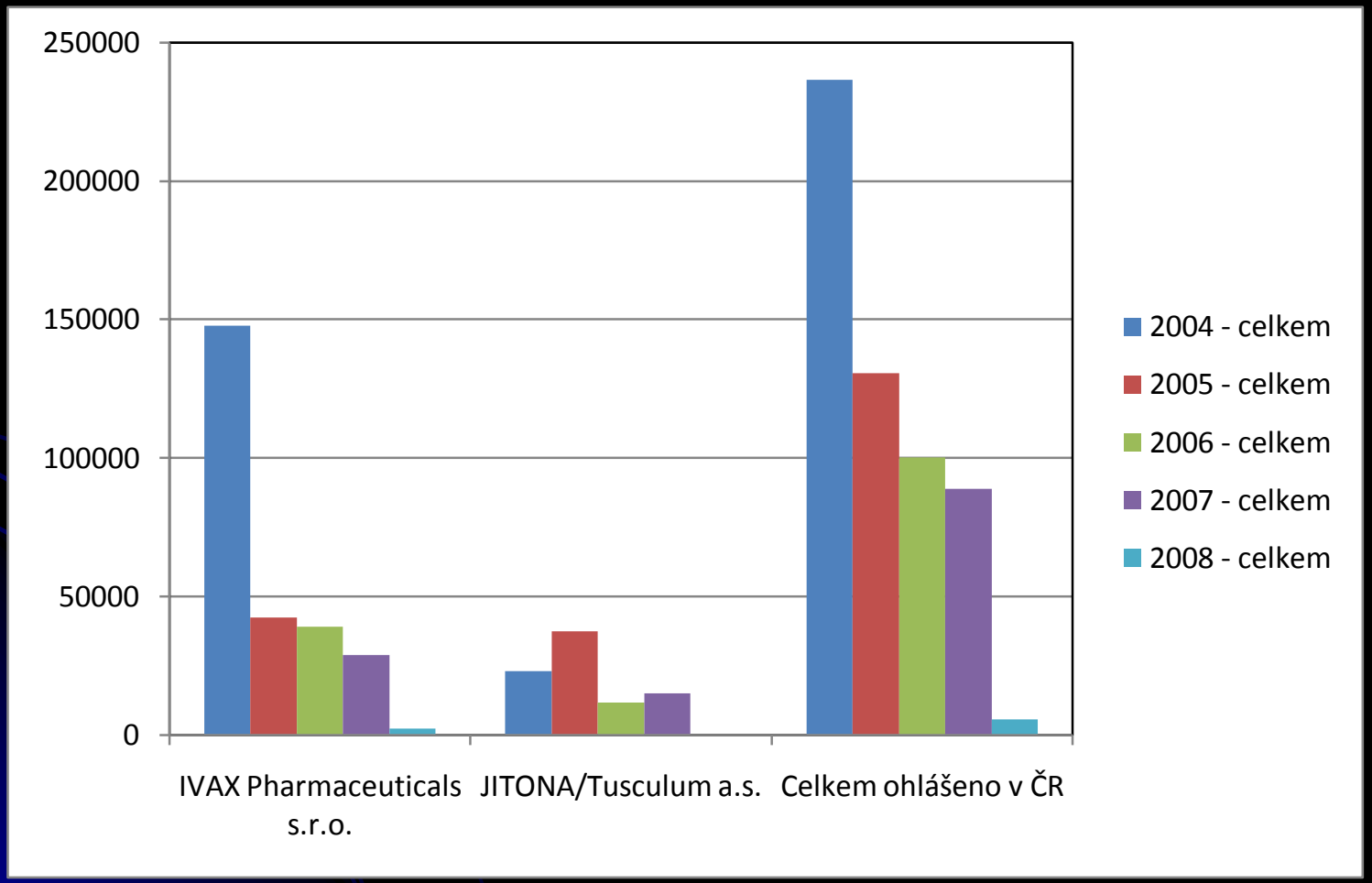
Czech Rep. 2009 (Category 1 according IARC)

Poř.	Organizace/firma	Lokalita	Kraj	Množství látek v kg	Trend
1.	KRONOSPAN OSB, s.r.o.	Jihlava	Vys	24196	↑
2.	KRONOSPAN CR, s.r.o.	Jihlava	Vys	23514	↑
3.	Dřevozpracující družstvo	Lukavec	Vys	6816	↓
4.	Metso Minerals (Wears)	Přerov	Olk	6243	↑
5.	DEZA, a.s., Valašské Mez	Valašské Meziříčí	Zlk	6078	↓
6.	Sokolovská uhelná, právi nástupce, a.s.	Chodov u Karlových Var	Kvk	2968	↑
7.	DUKOL Ostrava, s.r.o.	Ostrava	Msk	2749	↑
8.	BorsodChem MCHZ, s.r.o	Ostrava	Msk	2661	↓
9.	HP-Pelzer k. s.	Žatec	Ust	1394	↓
10.	TŘINECKÉ ŽELEZÁRNY, a.	Třinec	Msk	1332	↑

Kronospan facility, Jihlava (Czech Rep.)

Decreased emissions of dichloromethane

– PRTR Czech Rep. – former top-ten polluters winners



Kronospan
chipboard production

Kronospan
public campaign

- 1957: start of the chipboard production
- 1994: international owner
- 2005: complaints of citizens: dust, bad smell, health problems
- 2006: EIA for new technology
- 2006: exception from the dust limits
- 2006: petition, 3000 people
- 2007: fines / CZ Envi Inspectorate
- 2007: visit of minister of the environment
- 2007: some new technologies installed

International Context

PRTR Protocol to the Aarhus Convention

1996 - OECD has developed a recommendation on PRTR

PRTR Protocol was agreed at Aarhus Convention COP – May – 21 - 2003 in Kiev

E-PRTR is a mirror of PRTR Protocol

Chemically specific reporting on wastes is voluntary

PRTR and Stockholm Convention

Article 10, para 5

5. Each Party shall give sympathetic consideration to developing mechanisms, such as pollutant release and transfer registers, for the collection and dissemination of information on estimates of the annual quantities of the chemicals listed in Annex A, B or C that are released or disposed of.

Thank you

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