

II. Nástroje v oblasti prosazování zájmů ochrany životního prostředí

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II. Nástroje v oblasti prosazování zájmů ochrany životního prostředí

II.2. - Možnosti prosazování zájmů ochrany ŽP a regulace nakládání s CHLP na mezinárodní úrovni, globální cíle

II.2.1. - Mezinárodní organizace prosazující zájmy ochrany prostředí a zdraví, programy zaměřené na prosazování politiky v oblasti ŽP a CHLP

II.2.2. – Mezinárodní úmluvy a smlouvy na globální (Stockholmská úmluva, Rotterdamská úmluva, Vídeňská úmluva a Montrealský protokol, Minamatská úmluva) a regionální úrovni (prevence havárií, dálkové znečišťování ovzduší)

II.2.3. – Princip nejlepších dostupných technik (BAT, BREF, IPPC) a nejlepší možné environmentální praxe (BEP)

Contents

- ↪ **Global chemical agenda**
- ↪ **Stockholm Convention on persistent organic pollutants (POPs)**
- ↪ **Rotterdam Convention**
- ↪ **Basel Convention**
- ↪ **Convention on Long Range Transboundary Air Pollution and its POPs Protocol**
- ↪ **European strategy how to deal with chemicals**
- ↪ **EU POPs Regulation - introduction**

Contents

↪ Global chemical agenda



BASEL CONVENTION

Controlling transboundary movements of hazardous wastes and their disposal

ROTTERDAM CONVENTION

Sharing responsibility in the trade of hazardous chemicals

STOCKHOLM CONVENTION

Protecting human health and the environment from persistent organing pollutants (POP)



UNEP



FAO



BASEL CONVENTION



ROTTERDAM CONVENTION



STOCKHOLM CONVENTION

Global agenda to prevent and control releases of persistent toxic contaminants

Global Chemicals Policy Goals: from Stockholm 1972, Rio 1992 and Johannesburg 2002

Stockholm principle 13:

“States should adopt an integrated and coordinated approach to their development planning so ... that development is compatible with the need to protect and improve environment for the benefit of their population.”

Rio Agenda 21, Chapter 19:

Environmentally Sound Management Of Toxic Chemicals, Including Prevention Of Illegal International Traffic In Toxic And Dangerous Products

World Summit on Sustainable Development (WSSD 2002)

“By 2020 chemicals are to be used and produced in ways that lead to the minimization of significant adverse effects on human health and the environment”

To 2020 and beyond: Changing behaviour

Chemicals governance is a dynamic process that needs to keep pace with developments in production, consumption and knowledge

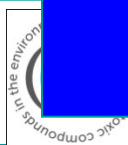
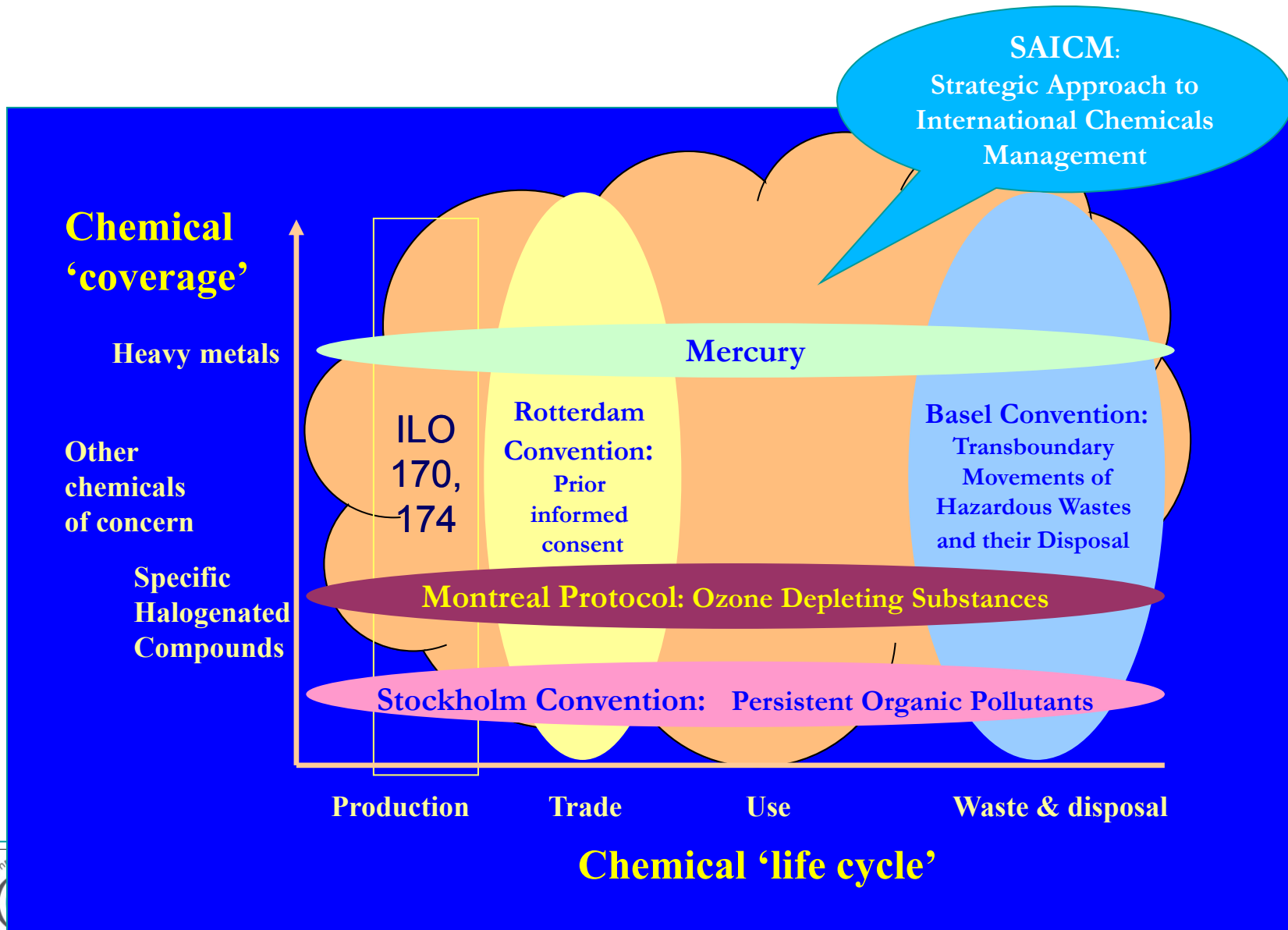


UNEP GC 26 noted that: ‘further action may be needed to strengthen the sound management of chemicals and wastes globally up to 2020 and beyond’

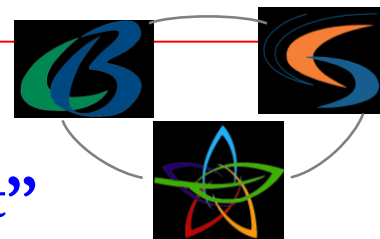
Our Common Challenges

- ↪ **Sound chemicals management governance:**
 - ❖ Acting across government and amongst a wide-range of stakeholders to build an enabling environment;
 - ❖ Using economic and market-based instruments;
 - ❖ Increasing monitoring to focus interventions
- ↪ **Industry roles and responsibilities:**
 - ❖ Building sound chemicals management into sustainable economies;
- ↪ **Assisting Parties to implement the chemicals and waste MEAs and SAICM:**
 - ❖ Building regulatory and technical capacities;
 - ❖ Enhancing monitoring and assessment networks;
 - ❖ Improving access to viable, safer alternatives and techniques

Words to Actions: Treaties to Partnerships



The three chemicals conventions



- ↪ **Common objective**
“To protect human health and the environment”
- ↪ **Covers “cradle-to-grave” management**
- ↪ **Basel Convention on Control of Transboundary Movement of Hazardous Wastes and their Disposal adopted in 1989**
179 Parties
- ↪ **Rotterdam Convention – international trade of certain hazardous chemicals adopted in 1998**
153 Parties
- ↪ **Stockholm Convention on persistent organic pollutants adopted in 2001**
179 Parties



Chemicals covered by the three conventions




- ↘ **Basel** covers hazardous wastes that are explosive, flammable, reactive, poisonous, infectious, corrosive, toxic or ecotoxic
- ↘ **Rotterdam** covers 43 pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons
- ↘ **Stockholm** covers 14 pesticides, and 9 industrial chemicals and by-products

Common Link

Most POPs are covered by all three Conventions

Many pesticides are subject to the three Conventions

Scope and coverage of the three conventions

	 <i>Basel Convention</i>	 Rotterdam Convention	 STOCKHOLM CONVENTION
Regulating for chemicals/wastes use (restrictions/bans)	X	X	X
Import/export controls	X	X	X
Evaluation and hazard assessment		X	X
Waste management	X		X
Hazard/risk communication	X	X	X
Replacement/alternatives		X	X
Environmental releases/emission reporting			X
Technical assistance	X	X	X
Financial assistance	x		x

Contents

- ↪ **Stockholm Convention on persistent organic pollutants (POPs)**

The objective of the Stockholm Convention

The objective of the Stockholm Convention is to protect human health and the environment from persistent organic pollutants. It differentiates between three categories of POPs:

- ↪ Intentionally produced POPs that are slated for elimination;
- ↪ Intentionally produced POPs are to be reduced and ultimately eliminated, except where there is a specified “acceptable purpose,” such as disease vector control, or exempted usage, in which case the production and/or use of the substance is restricted; and
- ↪ POPs that are unintentionally produced as the result of human activity and which are slated for continued minimization and, where feasible, ultimate elimination of total releases derived from anthropogenic sources.

www.pops.int

12 old Stockholm POPs

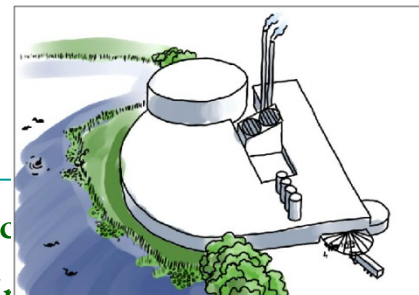
	Pesticide	Industrial Chemical	By-product
Aldrin	+		
Chlordane	+		
DDT	+		
Dieldrin	+		
Endrin	+		
Heptachlor	+		
Mirex	+		
Toxaphene	+		
Hexachlorobenzene	+	+	+
PCB		+	+
PCDD			+
PCDF			+

11 new Stockholm POPs

	Pesticide	Industrial Chemical	By-product
Chlordecone	+		
HBB		+	
α -HCH	+		+
β -HCH	+		+
γ -HCH	+	+	+
PeDBE		+	+
OCBDE		+	+
PFOS	+	+	
PeCBz	+	+	+
Endosulfan	+		
HBCD(D)		+	

How does it work?

- ↪ Eliminate or restrict the production, use, import and export of POPs
- ↪ Reduce releases from **unintentional POP** production
- ↪ Promote **BAT/BEP** to reduce POP emissions
- ↪ Eliminate POPs **stockpiles and wastes**
- ↪ Target additional **new POPs** for action
- ↪ Mechanism for **financial and technical assistance**
- ↪ Information exchange by **Clearing House Mechanism**



Tools

- ↪ **Standardized Toolkit** for Identification and Quantification of Dioxin and Furan Releases: Air, Water, Land, Products, Residues
- ↪ **Guidelines** for the Identification of PCBs and Materials Containing PCBs
- ↪ **Food contamination** monitoring and assessment programme
- ↪ **Brief Guide** to analytical methods for measuring lead in paint
- ↪ **Brief guide** to analytical methods for measuring lead in blood
- ↪ **Guidance** for Estimating Exposure to Mercury to Identify Populations at risk

Guidance for BAT/BEP

Guidelines on best available techniques and provisional guidance on best environmental practices relevant to Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants

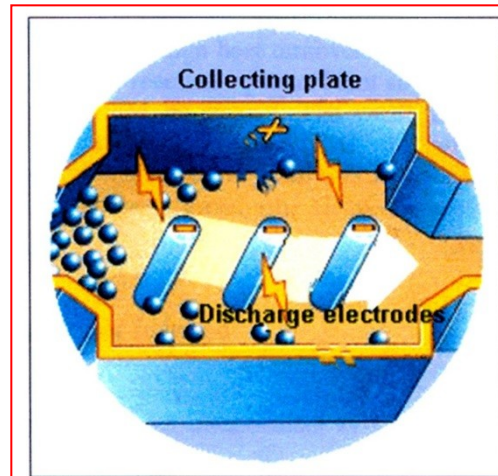
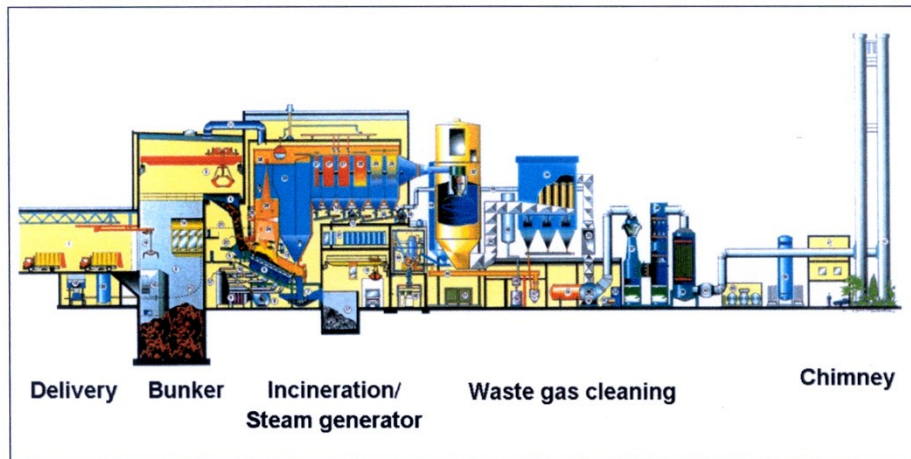
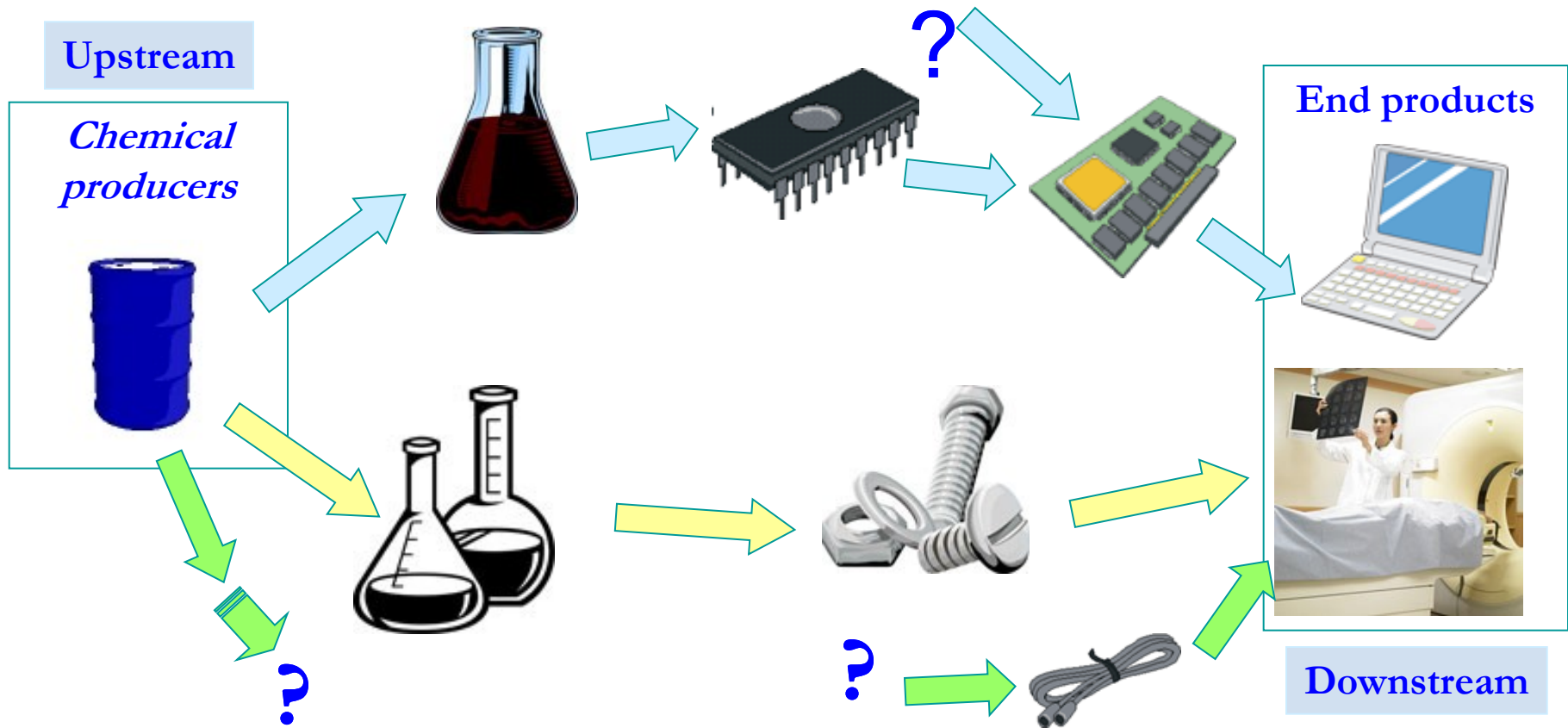


Figure 4.1 Electrostatic Precipitator Principle [source: EU BREF, 2004]

CHALLENGE: Industrial chemicals are used in numerous processes and parts



Contents

Rotterdam Convention

Rotterdamská úmluva

Cíl: posilovat sdílení odpovědnosti a spolupráce v mezinárodním obchodu za účelem ochrany zdraví a životního prostředí před vyjmenovanými nebezpečnými látkami a přípravky na ochranu rostlin

Sekretariát úmluvy sídlí v Římě (FAO - Organizace OSN pro zemědělství a výživu) a Ženevě (UNEP)

www.pic.int

Hlavní přínosy Rotterdamské úmluvy

- ↪ umožňuje **kontrolovat pohyb (dovoz a vývoz) vyjmenovaných látek**
- ↪ umožňuje **omezovat nežádoucí dovoz**
- ↪ podporuje **výměnu informací** mezi smluvními stranami (oznamování všech regulačních opatření)
- ↪ vyžaduje **správné označování látek** - v souladu s globálním harmonizovaným systémem (GHS), názvosloví, kódy, bezpečnostní listy atd.

Původní cíl bylo **účinně kontrolovat a omezovat použití nebezpečných látek**, ale skončilo to jen u mezinárodního obchodu a “PIC” postupu.

Národní legislativa

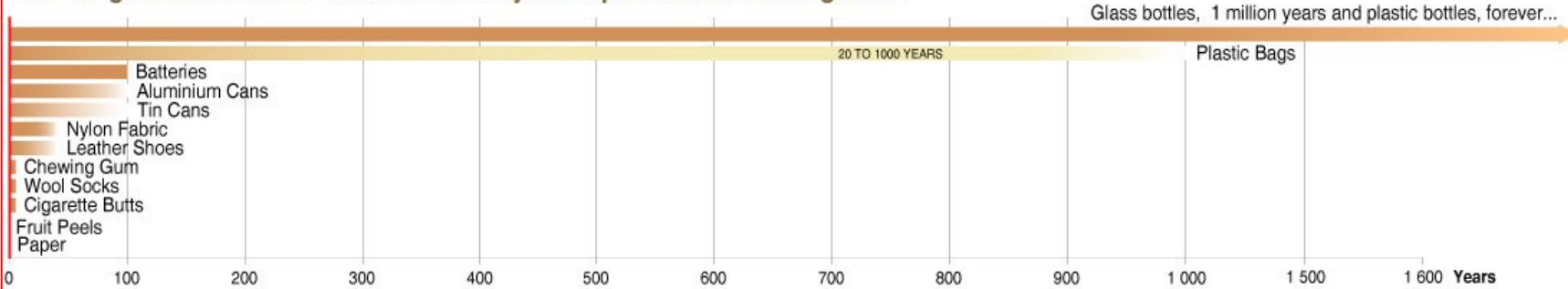
- ↪ **Rotterdamská úmluva** - české znění č. 94/2005 Sb.m.s
- ↪ **Nařízení EP a Rady EU č. 689/2008/ES** o dovozu a vývozu nebezpečných chemických látek
- ↪ EU má **věcnou a vědeckou podporu** ze Společného výzkumného centra (Joint Research Centre, JRC) a Institutu ochrany zdraví a spotřebitele (Institute for Health and Consumer Protection, IHCP) - Ispra, Itálie
 - ✓ databáze EDEXIM (Evropská databáze vývozu a dovozu nebezpečných chemických látek), část EDEXIM je heslovaná (heslované: přístup národní orgány (DNA), vývozci, celní správa), má však i veřejnou část
 - ✓ <http://edexim.jrc.ec.europa.eu>
- ↪ **Zákon o chemických látkách a přípravcích** v platném znění

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Basel Convention

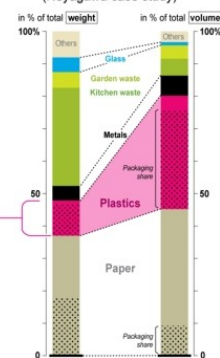
Odpady.... Nebezpečné odpady....

How long does it take for some commonly used products to biodegrade?

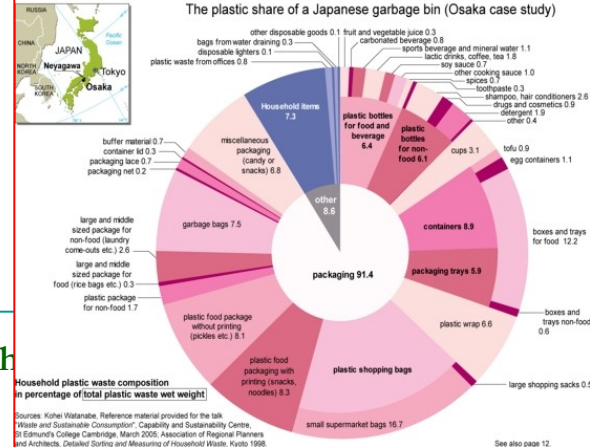


Source: The Coral Reef Alliance & Worldwise

Japanese household waste composition (Neyagawa case study)



The plastic share of a Japanese garbage bin (Osaka case study)

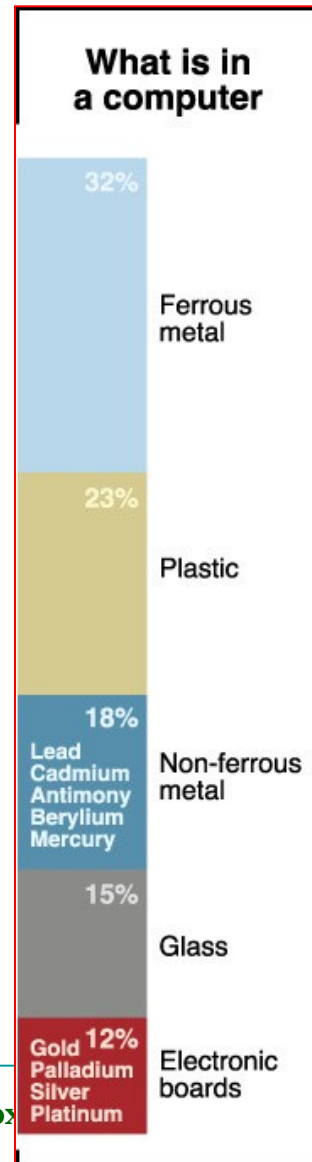
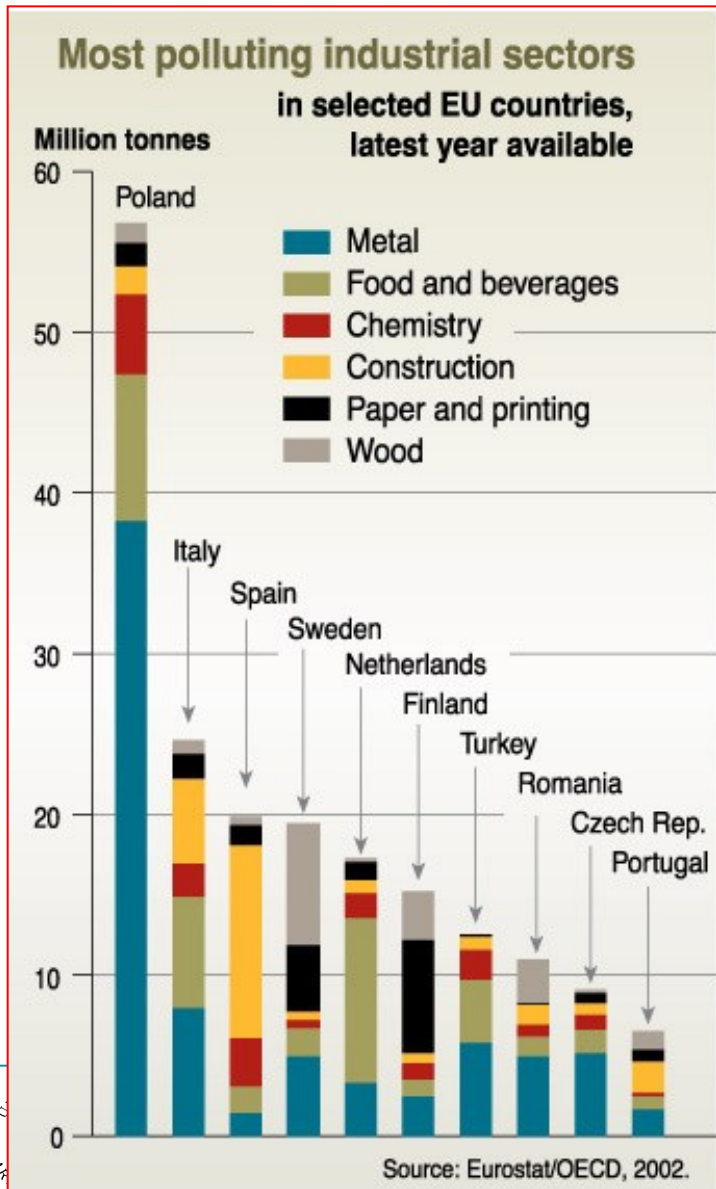


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Odpady.... Nebezpečné odpady....



Basilejská úmluva o kontrole pohybu nebezpečných odpadů přes hranice států a jejich zneškodňování



BASEL CONVENTION

Basilejská úmluva

Cíle a náplň:

- ↪ upravuje pohyb nebezpečných odpadů přes státní hranice za účelem jejich zneškodňování i využívání. **Cílem je snížit na minimum přeshraniční pohyb nebezpečných a ostatních odpadů** (a zneškodňovat je co nejblíže jejich původnímu zdroji)
- ↪ **minimalizovat vznik nebezpečných odpadů** (množství i nebezpečnost / rizika)
- ↪ **správné nakládání s odpady zahrnuje** – ukládání, přepravu, zpracování, recyklaci, opětovné použití, ukládání, konečné odstranění (likvidaci) = princip „3R“
- ↪ e-waste, demontáž lodí, nelegální přeprava a skládky, technické návody, PIC postup pro odpady, reporting, výbor pro dodržování úmluvy, regionální centra, PACE = partnerství k počítačům, mobilní telefony a další ...

Basilejská úmluva

Nebezpečné odpady v úmluvě (Příloha I)

Výbušné, hořlavé, jedovaté, nakažlivé, korozivní, toxické a ekotoxické

Přeshraniční přeprava je možná pouze mezi smluvními stranami úmluvy

Vývoz se zakazuje, pokud:

- ↪ Má dovážející smluvní strana zákaz dovozu dané látky
- ↪ Dovážející strana nedala souhlas k dovozu dané látky

Pomoc při implementaci - pokyny a návody (global guidelines and manuals - modelová legislativa, manuál implementace, instruktáž k dodržování závazků, technické pokyny = přijímané v rozhodnutích COP

Proces synergii



Proces synergií - Proč?

3 úmluvy dohromady věcně obsáhnou klíčové složky životního cyklu chemických látek

Rotterdamská úmluva

Hodnotí látky, hledá alternativy

PIC postup by měl zabránit nežádoucímu hromadění nevyžitélných zásob nebezpečných látek a odpadů

Stockholmská úmluva

Odstranění a omezení výroby (POPs) určitých látek

Dovoz a vývoz vyjmenovaných látek je možný jen pro účely environmentálně šetrného odstranění

Zavádění BAT/BEP postupů - snížení úniků do prostředí

Basilejská úmluva

Nakládání s odpady a pravidla jejich přeshraniční přepravy

Technické pokyny, jak správně nakládat s nebezpečnými odpady

Contents

↪ **Convention on Long Range Transboundary Air Pollution and its POPs Protocol**

Co je Evropská hospodářská komise OSN?

United Nations Economic Commission for Europe (UNECE)

- ↪ 56 členských států
- ↪ sídlí v Ženevě
- ↪ vznik v roce 1947 jako mezivládní instituce s cílem napomáhat ekonomické obnově po 2. světové válce
- ↪ nyní fórum severoamerických, evropských a středoasijských zemí pro ekonomickou spolupráci v oblasti ekonomické analýzy, péče o životní prostředí, statistika, udržitelná energetika, podpora rozvoje obchodu, průmyslu a podnikání, lesy a doprava + technická spolupráce
- ↪ 2 hlavní činnosti - ve vztahu k mezinárodním právním nástrojům anebo k mezinárodní politice životního prostředí

Subprogram životní prostředí v EHK OSN

Hlavní aktivity

- ↪ Aktivity se plánují ve dvouletém cyklu; řeší se ve Výboru pro politiku životního prostředí
- ↪ Podpora procesu „Životní prostředí pro Evropu“
- ↪ Podpora implementace mnohostranných environmentálních smluv EHK OSN
 - ❖ program hodnocení stavu a politik životního prostředí - tzv. Environmental Performance Review, EPR
 - ❖ monitoring životního prostředí – aktivity v rámci ad hoc pracovní skupiny pro monitoring a hodnocení
 - ❖ podpora sub-regionálních partnerských iniciativ – aktivity v rámci Iniciativy pro životní prostředí, vodu a bezpečnost ve střední Asii, Iniciativy pro životní prostředí a bezpečnost
- ↪ Podpora integrace hledisek životního prostředí do činnosti jiných sektorů

Životní prostředí pro Evropu (Environment for Europe)

- ↪ Fórum pro politiku ŽP na úrovni členských států EHK OSN
- ↪ Josef Vavroušek - ministr životního prostředí ČSFR
- ↪ cílem procesu je posílení mezinárodní spolupráce zemí a dalších partnerů (průmysl, obchod, doprava, nevládní organizace) při tvorbě a plnění politik životního prostředí a podpory udržitelného rozvoje
- ↪ ministerské konference - Dobříš (1991), Luzern (1993), Sofia (1995), Aarhus (1998), Kyjev (2003), Bělehrad (2007) a Astana (2011), další bude 2015
- ↪ proces přijal řadu regionálních dokumentů (protokol o těžkých kovech, Aarhuská úmluva, Kyjevský protokol a mnoho dalších)
- ↪ inicioval sledování a hodnocení pokroku při implementaci politik životního prostředí (EPR)
- ↪ v roce 2007 reforma procesu - přinášet přidanou hodnotu v oblastech nepokrytých jinými předpisy, udržet pan-evropské fórum

Úmluvy sjednané v rámci EHK OSN

Úmluva o dálkovém znečišťování ovzduší přesahujícím hranice států (CLRTAP)

Úmluva o účincích průmyslových havárií přesahujících hranice států

Úmluva o ochraně a využívání hraničních vodních toků a mezinárodních jezer

Úmluva o posuzování vlivů na životní prostředí přesahujících hranice států (Espoo úmluva)

Protokol o strategickém posuzování vlivů na životní prostředí (Protokol o SEA)

Úmluva o přístupu k informacím, účasti veřejnosti na rozhodování a přístupu k právní ochraně v záležitostech životního prostředí (Aarhuská úmluva)

Protokol o registrech úniků a přenosů znečišťujících látek (Protokol o PRTR)

Convention on Long-range Transboundary Air Pollution and its POPs Protocol



<http://www.unece.org/env/lrtap> (for general information)

<http://www.unece.org/env/wgs> (for documents)

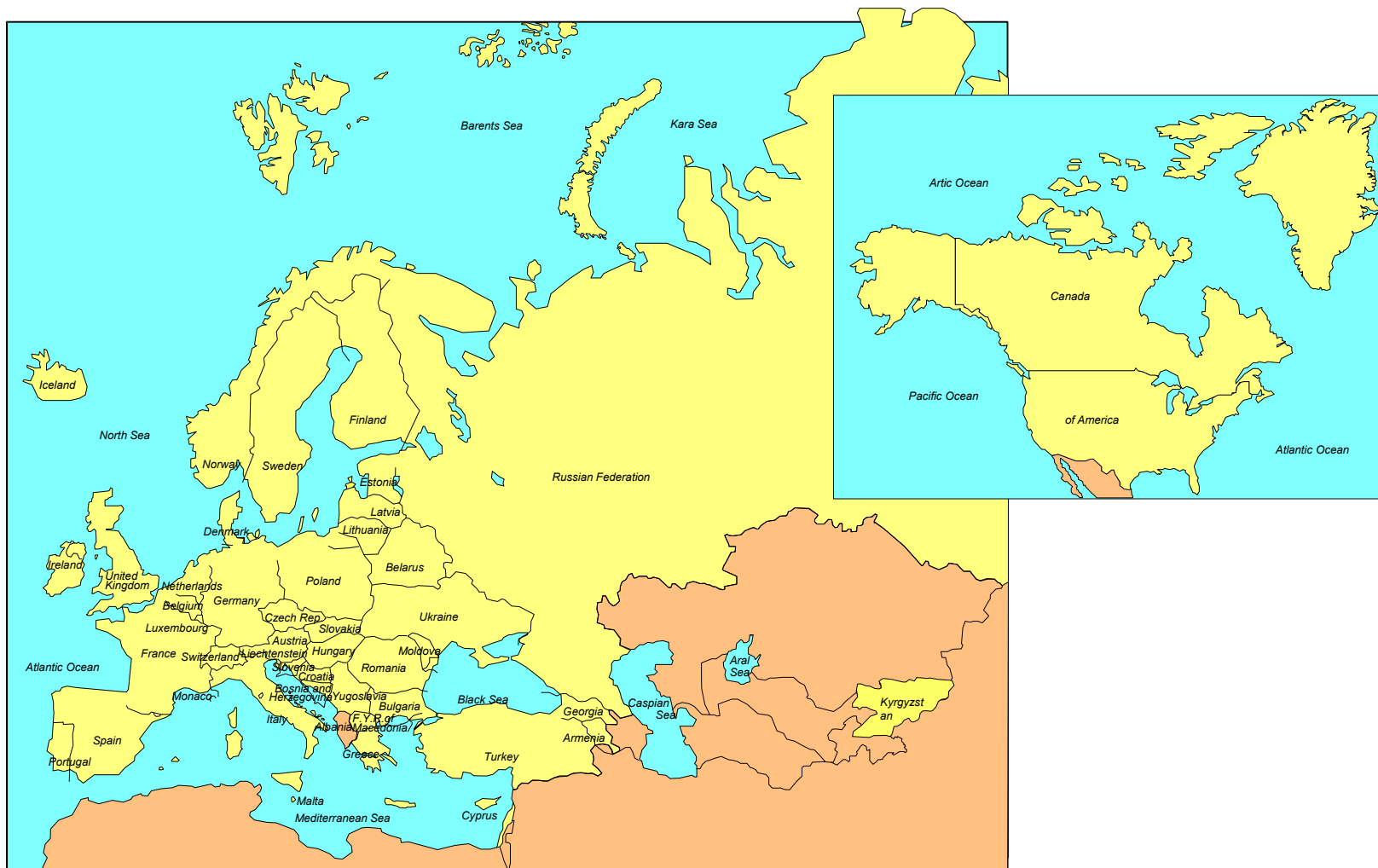
UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE



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The coverage of the Convention on Long-range Transboundary Air Pollution (49 Parties)

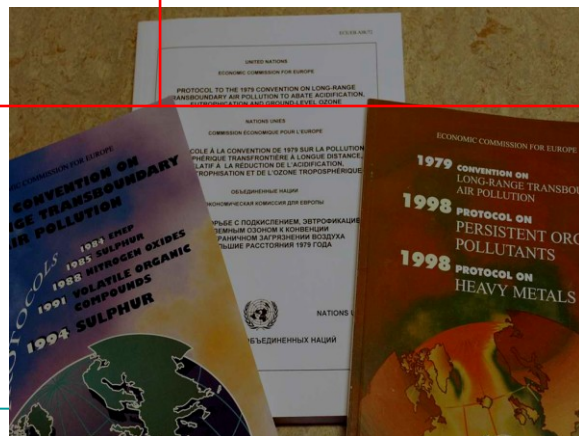


The Protocols in force

Geneva 1984	EMEP Protocol	40 Parties	Cost-sharing of monitoring and evaluation work
Helsinki 1985/1987	Sulphur Protocol	44 Parties	Flat-rate reduction (30%) of 1980 emissions by 1993
Sofia 1988/1991	NO_x Protocol	35 Parties	Flat-rate, stabilization of 1987 emissions by 1994, BAT requirements
Geneva 1991/1997	VOC Protocol	24 Parties	Flat-rate reduction (30%) by 1999, optional base year, stabilization for low-emission areas, BAT requirements
Oslo 1994/1998	2nd Sulphur Protocol	28 Parties	Effects-based emission ceilings (acidification), mandatory limit values for major sources

The Protocols in force

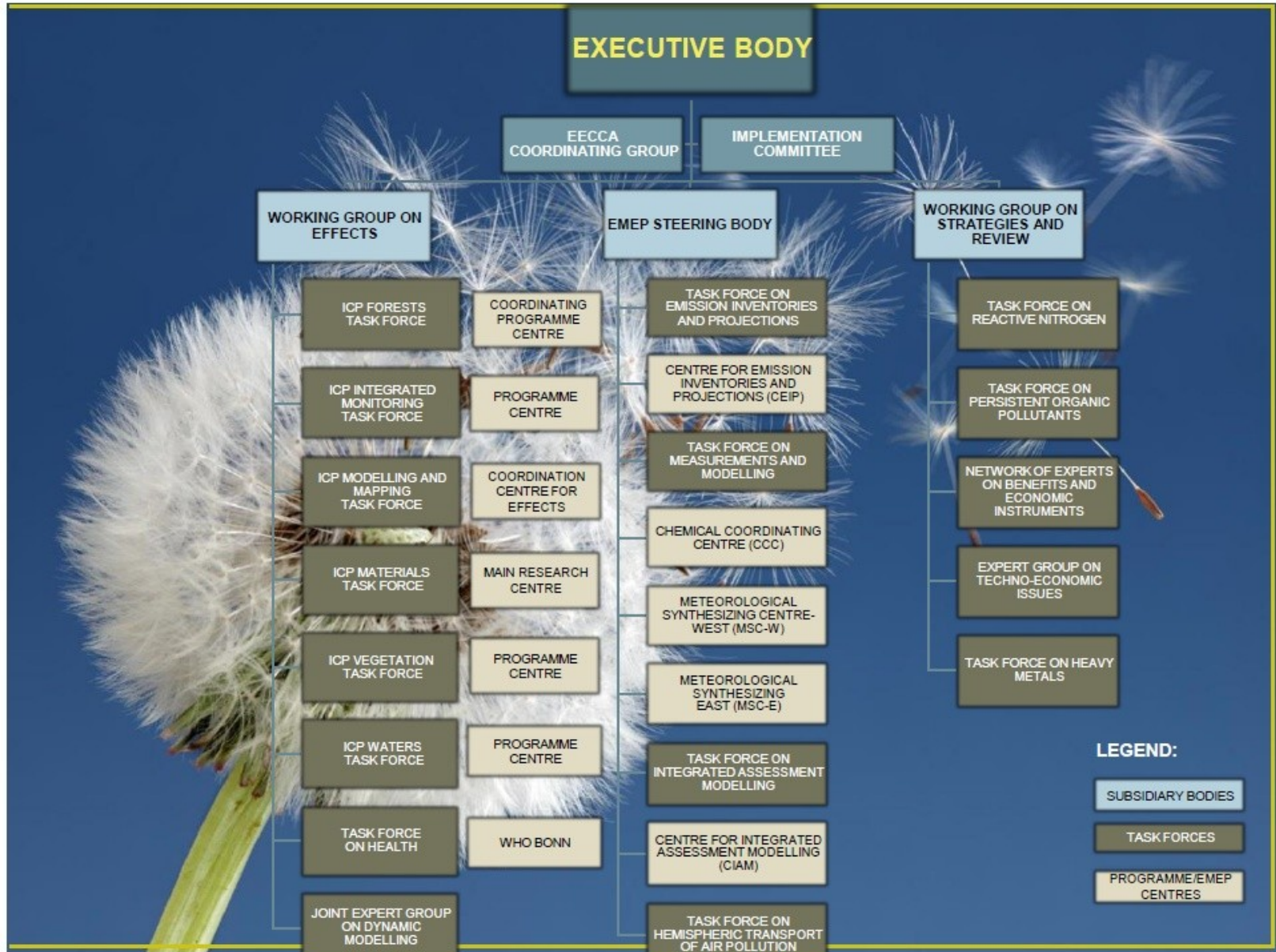
Aarhus 1998/2003	Heavy Metals Protocol	33 ratifications	Stabilize emissions of cadmium, lead and mercury; limit values for major sources
Aarhus 1998/2003	POPs Protocol	36 Signatories, 33 ratifications	Stabilize emissions of PAH, dioxins/furans and HCB; phase out selected pesticides, limit values for major sources
Gothenburg 1999/2005	Gothenburg Protocol	25 ratifications	To abate acidification, eutrophication and ground-level ozon



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Intergovernmental bodies, expert groups and scientific centres under the Convention



Regional approaches

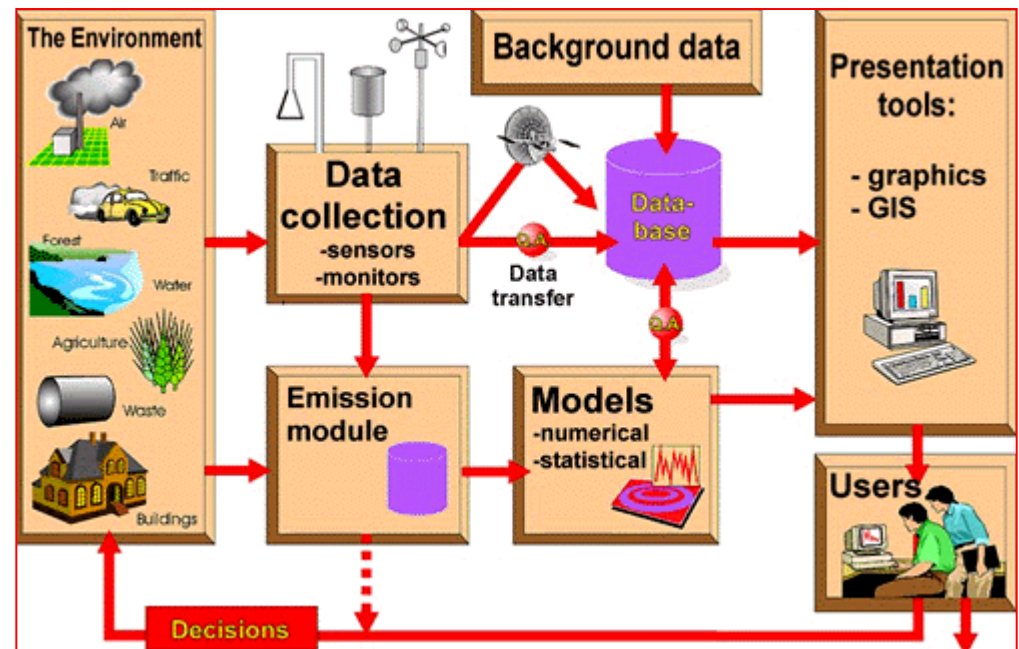
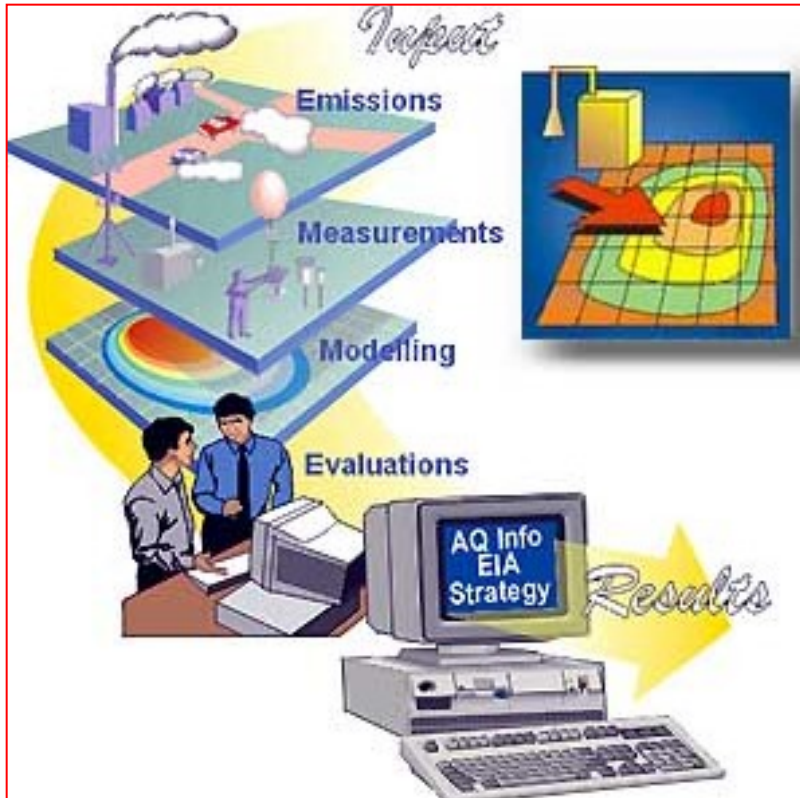
Regional:

- ↪ UN ECE Convention on Long Range Transboundary Air Pollution – POPs Protocol
- ↪ EMEP Activities

Co-operative Programme for Monitoring and Evaluation of the Long-Range Transmission of Air Pollutants in Europe



EMEP - Regional approaches



Úmluva o účincích průmyslových havárií přesahujících hranice států (Helsinská úmluva) - stručně

Cíl: předcházet účinkům závažných průmyslových havárií přesahujících hranice států za účelem ochrany zdraví, životního prostředí a majetku

- ↪ text úmluvy - 32 článků a XII příloh
- ↪ sekretariát úmluvy sídlí v Ženevě;
- ↪ nejvyšší jednání COP 1x za 2 roky (COP7 v roce 2012)
- ↪ byro úmluvy má 10 členů (max. 3 z nich nejsou ze smluvní strany úmluvy) - nejen administrativní, i věcná práce
- ↪ podpis 1992 v Helsinkách, vstup v platnost duben 2000
- ↪ celkem 40 smluvních stran

Industrial Accidents - Home - UNECE



Rozsah úmluvy?

- ↪ Vztahuje se na prevenci průmyslových havárií včetně havárií způsobených přírodními pohromami
- ↪ Nevztahuje se na válečné stavy, jaderné havárie, havárie na vojenských zařízeních, havárie přehrad, při pozemní dopravě, havárie na moři a v důsledku činností v mořském prostředí
- ↪ Havárie = událost vzniklá následkem nekontrolovaného vývoje během jakékoliv činnosti spojené s nebezpečnými látkami v zařízení při jejich výrobě, používání, skladování, manipulaci nebo zneškodňování a omezeně při dopravě
- ↪ Úmluva podporuje preventivní opatření a spolupráci či pomoc, výzkum a rozvoj, výměnu informací a technologií (součástí úmluvy je rovněž příprava na havárie a postupy likvidace)
- ↪ Látky, jichž se úmluva týká - příloha I
- ↪ Součástí úmluvy od r. 2003 - Program technické pomoci zemí VEKSA

Protokol o registrech úniků a přenosů znečišťujících látek (Protokol PRTR)

- ↪ Cílem je zlepšit přístup veřejnosti k informacím prostřednictvím sestavení ucelených, integrovaných, celostátních registrů úniků a přenosů znečišťujících látek (PRTR – pollution release and transfer registers) a usnadnit tak účast veřejnosti na rozhodování v záležitostech životního prostředí a přispět k prevenci a snižování znečištění ŽP
- ↪ Podepsán v Kyjevě v roce 2003
- ↪ Vstup v platnost říjen 2009 ⇒ 28 smluvních stran

Globální smlouva

- ❖ Protokol má 30 článků
- ❖ Přílohy I - seznam činností jež podléhají hlášení
- ❖ Příloha II - seznam 86 látek, jež mají být hlášeny (ovzduší, voda, půda, odpady) = látky s významnými vlivy na životní prostředí a lidské zdraví
- ❖ Příloha III - definice odstraňování (“D”), využití (“R”)
- ❖ Příloha IV - Rozhodčí řízení (Arbitration and conciliatin procedure)

Registr na EU úrovni - Evropský PRTR

- ↪ V prosinci 2005 přijala Rada EU rozhodnutí č. 2006/61/ES o Kyjevském protokolu
- ↪ V návaznosti vydáno nařízení EP a Rady ES č. 166/2006 o zřízení registru - začleněna ustavení Protokolu
- ↪ Obsahuje v příloze II **91 látek včetně prahových hodnot**
- ↪ Registr zahrne úniky látek do ovzduší, vody a půdy, o přenosech odpadů, látky v odpadních vodách (čištěné mimo lokalitu) a úniky látek z rozptýlených zdrojů (jsou-li data k dispozici)
- ↪ Obecně lze rozdělit do **9 odvětví**: energetika, výroba a zpracování kovů, zpracování nerostů, chemický průmysl, nakládání s odpady a odpadními vodami, intenzivní živočišná výroba, živočišné a rostlinné produkty - výroba potravin a nápojů a ostatní činnosti

E-PRTR

Integrovaný registr znečištění životního prostředí (IRZ)

- ↪ **Národní databáze** obsahující informace o únicích a přenosech vybraných znečišťujících látek, které jsou každoročně ohlašovány za jednotlivé provozovny (každoročně do 15.2.) znečišťování vody, ovzduší, půdy či na produkci chemických látek v odpadech a odpadních vodách
- ↪ **Ohlášené informace** jsou odstupně státní správě, veřejnosti, vědeckým pracovištím i nevládním organizacím a médiím
- ↪ Legislativně je seznam stanoven v nařízení vlády č. 145/2008 Sb., kterým se stanoví seznam znečišťujících látek a prahových hodnot a údaje požadované pro ohlašování do integrovaného registru znečišťování životního prostředí
- ↪ Novela č. 450/2011 Sb. snižuje celkový počet sledovaných látek v přenosech v odpadech z původního počtu 72 na 26 znečišťujících látek, ohlašovací limity se nemění.

www.irz.cz

Research Centre for Toxic Compounds in the Environment

<http://recetox.muni.cz>

Contents

↪ **European strategy how to deal with chemicals**

EU and risk assessment

± 40 Directives or Regulations concerning the evaluation and management of the dangers/risks associated with chemical substances

- ↪ **Regulation EEC 793/93 – Existing substances**
- ↪ **Dir. 67/548/EEC – New substances**
- ↪ **Dir. 98/8/EC – Biocides / Plant Protection Products**
- ↪ **Further Directives – E.R.A. of new pharmaceuticals**

EU and risk assessment

Existing substances

- ↪ 100 196 substances in EINECS
- ↪ 2 747 HPVCs (High Production Volume Chemicals)
 - 14% minimum data-set (base-set)
 - 65% less than base-set
 - 21% no toxicity data
- ↪ Various priority lists
 - Aquatic hazard (EU Water framework directive)
 - Endocrine disruptors
 -

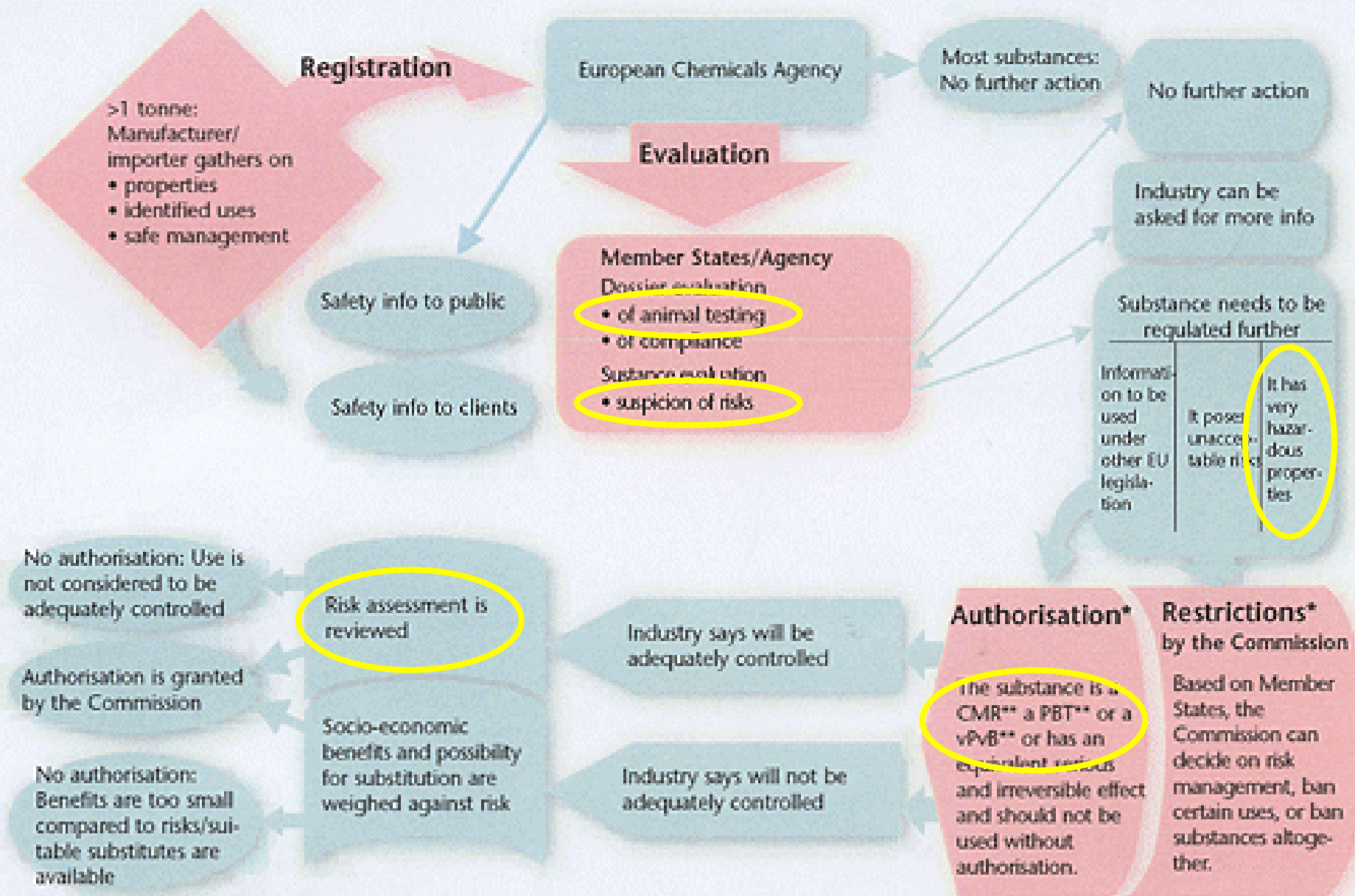
REACH Registration, Evaluation and Authorisation of Chemicals

- ↪ 27-2-2001: White Paper on the Strategy for Future Chemicals Policy
- ↪ 23-10-2003: Commission's proposal REACH
- ↪ December 2008: Pre-registration mandatory (all chemicals in EU must be registered at ECHA)



The screenshot shows the ECHA website homepage. At the top left is the ECHA logo, which consists of a stylized 'A' with a European Union flag motif, followed by the letters 'ECHA'. Below the logo is the text 'European Chemicals Agency'. A navigation menu on the left side includes links for HOME, SIEF, REACH, CONSULTATIONS, ECHA CHEM, REACH-IT, CLASSIFICATION, and HELP. The main content area features the heading 'European Chemicals Agency (ECHA)' and a paragraph describing the Agency's role in managing REACH processes. A 'More' link is visible at the bottom of the text.

European Chemicals Agency
(<http://echa.europa.eu>)



* Substances do not have to be registered or evaluated to be placed under authorisation or restriction. They can be identified in other ways.

** Can cause cancer or mutations, or is toxic to reproduction; or is persistent, bio-accumulative and toxic, or very persistent and very bio-accumulative.

REACH: aims and timing

Major goals

- ↗ Protection of man and the environment
- ↗ Increase competitiveness of EU chemical industry
- ↗ Increase transparency
- ↗ Avoid fragmentation of market
- ↗ Integration with international policies
- ↗ Reduction use of test animals

Approach

- ↗ Industry is responsible – provides data

30 000 existing substances

- ↗ 0-3 year (2010): all HPVC and CMR substances (~ 3000)
- ↗ 4-6 year (2013): all 100-1000 t/y substances
- ↗ 7-11 year (2018): all 10-100 and 1-10 t/y substances

European Process on Environment and Health

- ↪ Since 1989
- ↪ 5 European conferences of Ministers of Health and Environment

Parma Declaration on Environment and Health, Conference Declaration, 2010
Declaration of the Fourth Ministerial Conference on Environment and Health,
Conference Declaration, 2004

Charter on Transport, Environment and Health, Charter, 1999

Protocol on Water and Health to the 1992 Convention on the Protection and
Use of Transboundary Watercourses and International Lakes Conference
Protocol, 1999

Environmental Health Action Plan for Europe (EHAPE), 1994

Helsinki Declaration on Action for Environment and Health in Europe
Conference Declaration, 1994

European Charter on Environment and Health, 1989

Parma Declaration

RPG 4 - Preventing diseases

arising from chemical... environment

- ↪ Contribute SAICM and “mercury” treaty
- ↪ Protect children and breast-feeding women from harmful substances and preparations
- ↪ Identify risks of exposure to carcinogens, mutagens, reproductive toxicants and EDCs
- ↪ Call for research into the potentially adverse effects of persistent, endocrine-disrupting and bioaccumulating chemicals



EDs – EU regulation

6. Important pieces of **EU chemicals regulation** are entirely **inadequate** for capturing endocrine disrupting effects. Even internationally validated and well established test systems that have been available for over a decade **have not been implemented. Any measures** aimed at protecting humans and wildlife from endocrine disrupters will be ineffective if **testing requirements are not updated to incorporate endocrine disrupter testing.**

↙ The current testing and information requirements defined for industrial and commercial chemicals (REACH) and for plant protection products (PPPR) are not geared towards the identification of endocrine disrupting chemicals. The relevant regulations and directives (e.g. 544/2011 and 545/2011) require urgent updates to include the best available science.

↙ Testing with the most sensitive and appropriate endpoints and with exposure regimens that cover periods of heightened sensitivity during development is currently not mandatory. As a result, many endocrine disrupting chemicals are **not identified.**

EDs – EU regulation

7. Proposals for the regulation of endocrine disrupting pesticides from certain EU Member States do not follow scientifically sound principles and are not sufficiently protective. By regulating as few endocrine disrupters as possible they place commercial interests above the protection of human and wildlife health.

- ↪ These proposals focus on the use of potency-based cut-off values as the basis for classifying pesticides as endocrine disrupters. We are concerned that these values set the bar too high, with the serious possibility that hardly any substance will be classified as an endocrine disrupter in the regulatory sense, thus effectively undermining the intention of the legislation.
- ↪ Given the likelihood of mixture effects from exposures to numerous EDCs with similar effect profiles, even EDCs considered to be weakly potent are of concern because they may add to the combined effect.

Contents

EU POPs Regulation - introduction

EU POPs Regulation

The **EC POPs Regulation** is the implementing legislation in the EU Member States of the Stockholm Convention.

It is also the implementing legislation for the 1998 **POPs Protocol** of the 1979 United Nations Economic Commission for Europe (UNECE) Long Range Transboundary Air Pollution Convention (CLRTAP).

EU POPs Regulation

EC Persistent Organic Pollutants (POPs) Regulation No. 850/2004 of 29 April 2004 for the protection of human health and the environment + **new amendments** concerning to newly adopted POPs

Other legal instruments placing controls on POPs in the EU

The EC and the Stockholm Convention lists these as

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) contains provisions specifying how substances should be assessed with regard to their POPs characteristics.

Under REACH, the production and use of substances exhibiting POP characteristics can be prevented and new POPs candidates can be identified.

Regulation (EC) No 689/2008 of the European Parliament and Council of 17 June 2008 concerning the export and import of dangerous chemicals (PIC Regulation).

This Regulation prohibits the export of 10 out of the 12 POPs substances initially listed in the Stockholm Convention.

Other legal instruments placing controls on POPs in the EU

Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT).

This Directive aims to completely dispose of PCBs and equipment containing PCBs as soon as possible and equipment with PCB volumes of more than 5 litres before the end of 2010. It also sets requirements for the environmentally sound disposal of PCBs.

Directive 2008/1/EC concerning integrated pollution prevention and control (IPPC Directive)

The IPPC Directive lays down control measures to reduce emissions of unintentionally produced POPs by covering the major industrial stationary sources of these POPs.

Other legal instruments placing controls on POPs in the EU

Directive 2000/76/EC on the incineration of waste (WID)

The WID Directive covers all waste incineration facilities that are a very important source of POPs by-products. In particular it sets strict limits for emission rates of dioxins / furans in the air.

Best available techniques (BAT)/Best environmental practices (BEP)

Contents

↪ **Definitions**

↪ **SC BAT/BEP Guidelines**



Contents

Definitions



BAT/BEP - Definitions

Best available techniques (BAT)

means the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for release limitations designed to prevent and, where that is not practicable, generally to reduce releases of chemicals listed in Part I of Annex C and their impact on the environment as a whole.

In this regard:

BAT/BEP - Definitions

- ↪ **Techniques** includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
- ↪ **Available** techniques means those techniques that are accessible to the operator and that are developed on a scale that allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages; and
- ↪ **Best** means most effective in achieving a high general level of protection of the environment as a whole;

BAT/BEP - Definitions

Best environmental practices (BEP)

means the application of the most appropriate combination of environmental control measures and strategies

The concept of best available techniques is not aimed at the prescription of any specific technique or technology, but at taking into account the technical characteristics of the installation concerned, *its geographical location and the local environmental conditions*

Stockholm Convention, Article 5 paragraph (f)

Stockholm Convention, Annex C, Part V, section B.

BAT/BEP- available guidance



In the Stockholm Convention

- ❖ Annex C: General guidance on prevention and release reduction measures
- ❖ Guidelines on BAT/BEP: Draft guidelines available at http://www.pops.int/documents/meetings/bat_bep
- ❖ UNEP Toolkit (overview of technologies from obsolete to BAT)



In the UNECE CLRTAP POPs Protocol

- ❖ Annex V: BAT to control emissions of POPs from major stationary sources
- ❖ <http://www.unece.org/env/lrtap>



EU/ BAT Reference Documents (BREF)

<http://eippcb.jrc.es>

Economic and social implications

- ↪ **Economic and social conditions** in a country will determine what are “best” available techniques and “best” environmental practices
 - ↪ **Large scale processes** (cement kilns, sinter plants, power plants...) BAT/BEP will be similar world-wide
 - ↪ **Small scale processes** (crematoria, home heating/cooking, motor vehicles, waste burning...) technologies vary from country to country
 - ↪ Determining what is “**BAT/BEP**” needs to include analysis of economic feasibility
- “Best” = best option that is economically feasible under the socio-economic conditions present**

Sound management of POPs by-products

Sound management of POPs by-products →
= sound management of their release sources
PROCESS SPECIFIC MANAGEMENT



Basic possible approaches:

- ↪ Alternatives (alternatives with similar usefulness but avoiding POPs releases)
- ↪ Primary measures (targeted onto the process-BAT, BEP, cleaner technologies)
- ↪ Secondary measures (end-of-pipe- BACT)

Management of releases targeted to a particular pollutant will influence releases of other pollutants

Proposed requirements for sound disposal of POPs

Destruction and/or irreversible transformation of POPs wastes must achieve a destruction efficiency (DE)/ destruction and removal efficiency (DRE) of 99.9999%

UNITED NATIONS		EP
	United Nations Environment Programme	Distr. GENERAL
		UNEP/CHW/OEWG/1/INF/6 25 March 2003
		ENGLISH ONLY
<hr/>		
OPEN-ENDED WORKING GROUP OF THE BASEL CONVENTION ON THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTES AND THEIR DISPOSAL		
First session Geneva, 28 April to 2 May 2003		
Item 5 (d) of the provisional agenda*		
DRAFT TECHNICAL GUIDELINES ON THE ENVIRONMENTALLY SOUND MANAGEMENT OF PERSISTENT ORGANIC POLLUTANTS AS WASTES		

Levels of destruction and irreversible transformation

Recognizing the following considerations:

- (a) Both **destruction efficiency (DE)** and **destruction removal efficiency (DRE)** are a function of the initial POP content and do not cover formation of unintentionally produced POPs during destruction or irreversible transformation;
- (b) **DE** is an important criterion for helping to assess technologies for destruction and irreversible transformation, but can be difficult to measure in a reproducible and comparable manner, especially on a regular basis;
- (c) **DRE** considers only emissions to air;
- (d) **BAT and BEP** set safe design and operating conditions, including expected destruction efficiencies, in particular circumstances on a technology by technology basis;

Levels of destruction and irreversible transformation

- (e) **BAT and BEP** have not been identified for all disposal methods;
- (f) **Existence of** pertinent national legislation and international rules, standards and guidelines;
- (g) **Lack of knowledge and data;**

Levels of destruction and irreversible transformation

The following provisional definition for levels of destruction and irreversible transformation, based upon absolute levels (i.e., waste output streams of treatment processes) should be applied:

(a) Atmospheric emissions:

PCDDs and PCDFs: 0.1 ng TEQ Nm⁻³;

All other POPs: pertinent national legislation and international rules, standards and guidelines, examples of pertinent national legislation can be found in annex II;

Determined according to national or international methods and standards.

TEQ as referred to in annex C, part IV, paragraph 2, of the Stockholm Convention, but only for PCDDs and PCDFs.

Levels of destruction and irreversible transformation

Calculated on the basis of the mass of the POP content within the waste, minus the mass of the remaining POP content in the gaseous, liquid and solid residues, divided by the mass of the POP content within the waste, i.e.,

$$DE = (\text{POP content within waste} - \text{POP content within gas, liquid and solid residual}) / \text{POP content within the waste}$$

Levels of destruction and irreversible transformation

Calculated on the basis of mass of the POP content within the waste, minus the mass of the remaining POP content in the gaseous residues (stack emissions), divided by the mass of the POP content within the wastes, i.e.,

$$\text{DRE} = (\text{POP content within waste} - \text{POP content within gas residual}) / \text{POP content within the waste.}$$

TEQ as referred to in annex C, Part IV, paragraph 2 of the Stockholm Convention, but only for PCDDs and PCDFs.
Nm³ refers to dry gas, 101.3 kPa and 273.15 K.
Standardization at 11 per cent O₂.

Levels of destruction and irreversible transformation

- (b) **Aqueous releases:** pertinent national legislation and international rules, standards and guidelines, examples of pertinent national legislation can be found in annex II;
- (c) **Solid residues:** POP contents should be below the low POP contents defined in section A above of this chapter.

However, if the POP content of unintentionally produced PCDD/PCDFs is above the low POP content defined in section A, the solid residues should be treated in accordance with section IV.G.

In addition, technologies for destruction and irreversible transformation should be operated in accordance with BAT and BEP.

Criteria for determining best available techniques

1. The use of **low-waste technology**
2. The use of **less hazardous substances**
3. The furthering of **recovery and recycling** of substances generated and used in the process and of waste, where appropriate
4. **Comparable processes**, facilities or methods of operation which have been tried with success on an industrial scale
5. **Technological advances and changes** in scientific knowledge and understanding
6. **The nature, effects and volume of the emissions** concerned

Criteria for determining best available techniques

7. The commissioning dates for new or existing installations
8. The length of time needed to introduce the best available technique
9. The consumption and nature of raw materials (including water) used in the process and energy efficiency
10. The need to prevent or reduce to a minimum the overall impact of the emissions on the environment and the risks to it
11. The need to prevent accidents and to minimise the consequences for the environment
12. Information published by public international organisations.

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SC BAT/BEP Guidelines



BAT/BEP Guidance

**GUIDELINES ON BEST AVAILABLE TECHNIQUES AND PROVISIONAL
GUIDANCE ON BEST ENVIRONMENTAL PRACTICES RELEVANT
TO ARTICLE 5 AND ANNEX C OF THE STOCKHOLM
CONVENTION ON PERSISTENT ORGANIC POLLUTANTS,
DECEMBER 2006**

**[HTTP://CHM.POPS.INT/PROGRAMMES/BAT/BEP/GUIDELINES
/TABID/187/LANGUAGE/EN-US/DEFAULT.ASPX](http://chm.pops.int/programmes/bat/bep/guidelines/tabid/187/language/en-us/default.aspx)**

Structure

The document consists of six main sections:

- ↪ Sections I – IV : General in nature
- ↪ Sections VI-VII: source specific

Structure of document

Section I - Introduction

- ↪ purpose and structure of the document;
- ↪ a brief description of the characteristics and risks of chemicals listed in Annex C of the Stockholm Convention;
- ↪ directly relevant provisions of the Stockholm Convention, Article 5 and Annex C;
- ↪ a summary of required measures under these provisions; and
- ↪ relationship of these provisions to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

Structure of document

Section II – Consideration of alternatives in the application of BAT

- ↪ provides guidance on consideration of alternatives, including:
- ❖ The Stockholm Convention and new sources
 - ❖ An approach to consideration of alternatives
 - ❖ information on other considerations of the Stockholm Convention (health, safety, environmental, social and economic, Annex C);

Structure of document

Section III - general guidance, applicable principles and descriptions of considerations that cut across multiple source categories

Section IV - a compilation of the summaries provided for each category sources in sections V and VI.

Structure of document

Section V & VI - contain specific guidelines for each source category listed in Part II and Part III of Annex C of the Stockholm Convention. For each of the source-specific guidelines, the following information is provided:

- ↪ **Process description;**
- ↪ **Sources of chemicals listed in Annex C;**
- ↪ **Primary and secondary measures;**
- ↪ **Performance standards;**
- ↪ **Performance reporting;**
- ↪ **Relevant case studies.**

BAT/BEP Guidance

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Structure of document

References and bibliographic information are provided for each of the guidelines.

The complete list of references and bibliographic information for the guidelines and guidance is available at: www.pops.int

Tasks of the EGBATBEP

Enhancement of the document to make it easier to understand and use;

- ↪ Language has been simplified
- ↪ Editorial refinements, corrections and technical updates made
- ↪ Diagrams and illustrations streamlined
- ↪ Figures and measures standardized
- ↪ Format of the document

Published in small booklets

- ↪ 1 (Sections I-IV)
- ↪ Sections V – VI sources in separate booklets all containing a CD with complete text of guidance.

Tasks of the EGBATBEP

Enhancement of the guidelines to identify and more fully address needs and circumstances of developing countries and regions, particularly with respect to sources of relevance to developing countries of substances listed in Annex C to the Convention;

Provision of additional information on available alternatives, including indigenous ones, and on the use of substitute or modified materials, products and processes, with respect to Annex C sources, and development of criteria for evaluating alternatives;

Tasks of the EGBATBEP

Identification of **considerations** that countries may take into account in establishing requirements for best available techniques, including economic and social considerations as described in the Convention;

Inclusion of additional information on achievable release performance levels; and

Provision of additional references for measuring, monitoring and reporting releases of unintentionally produced persistent organic pollutants, especially source categories listed in Part II of Annex C of the Convention;