# The Chemicals MEAs family

## Basel, Rotterdam, SAICM and Stockholm

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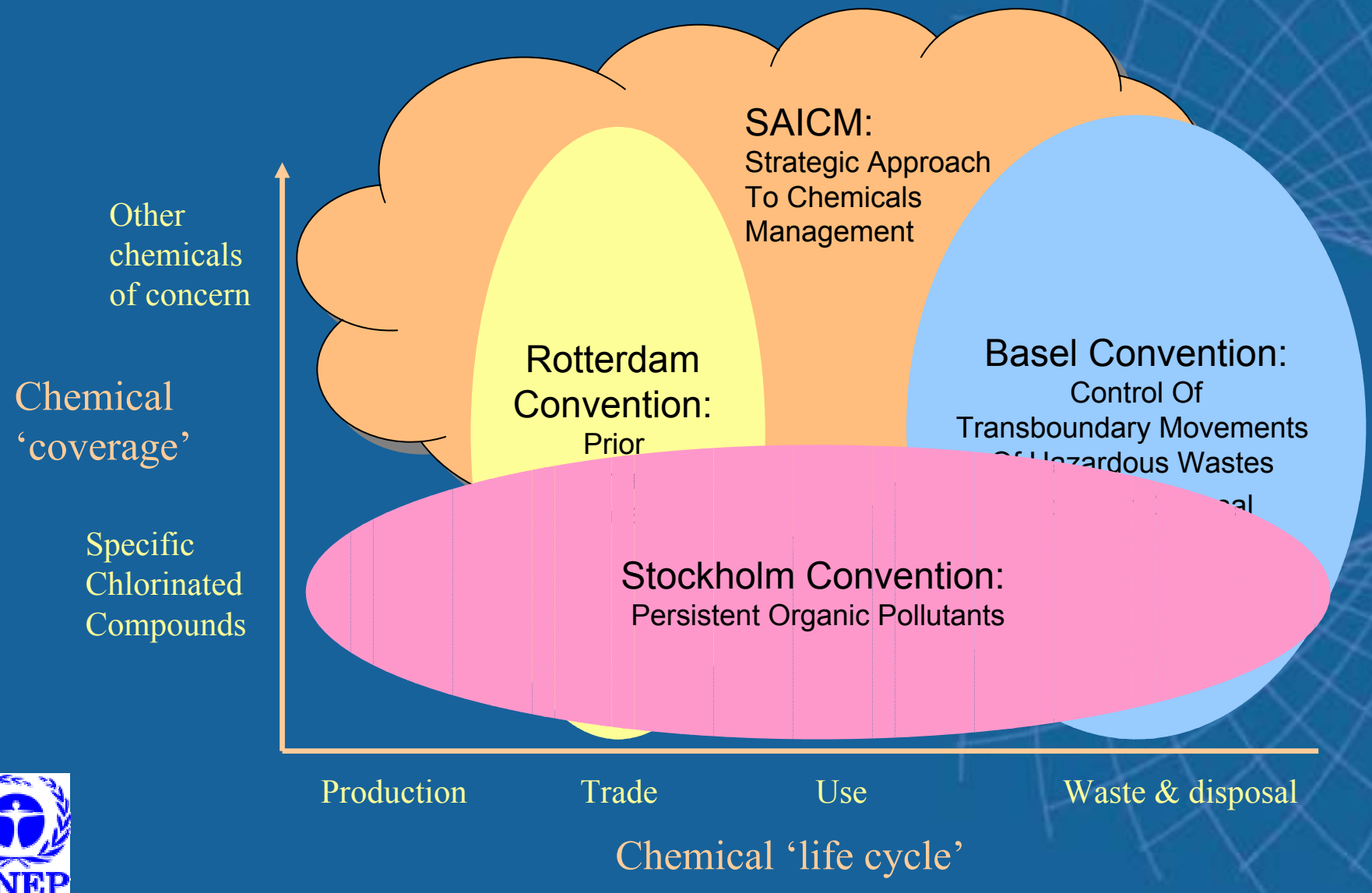
# Chemical MEAs

| | Scope | Entry into force | Parties |
|---|---|---|---|
| **Basel** | **Transboundary movement of hazardous wastes and their disposal** | **May 1992** | **163** |
| **Rotterdam** | **Prior informed consent procedure for hazardous chemicals & pesticides in international trade** | **February 2004** | **83** |
| **Stockholm** | **Persistent organic pollutants** | **May 2004** | **94** |
| **SAICM** | **Integrated chemicals management** | **2006?** | |

# Scope of the chemical MEAs



# Article 3:
## Measures to reduce or eliminate releases from intentional production and use

- **Prohibits production & use**
  - **Subject to Annex A & Annex B**
- **Restricts trade of POPs chemicals to:**
  - **purposes/uses permitted under registered specific exemptions/acceptable purpose**
  - **environmentally sound disposal**
    - **Link to paragraph 1d of Art 6, and to Basel Convention**
  - **exports only "taking into account any relevant provisions in existing international prior informed consent instruments"**
    - **Art. 3.2(b) specific reference to Rotterdam Convention**

# Rotterdam Convention: Scope

- **Banned or severely restricted chemicals**
  - **Subject to 'Final Regulatory Action'**
- **Severely hazardous pesticide formulations**

**= 'Annex III chemicals' (+ voluntary PIC procedure)**

- **Including many listed in the Stockholm Convention**
- **Parties may propose additions to the annex for consideration by a Chemicals Review Committee with decision by the CoP**

- **Not:**
  - **Narcotics, radioactive material, wastes, chemical weapons, pharmaceuticals, food & additives**

# Rotterdam and trade

**To promote shared responsibility & cooperation amongst Parties**

- Based on 'Final Regulatory Action'
- Facilitating information exchange
- Coordinated decision making (PIC)
- Harmonised labelling and coding

GHS

**Stockholm Convention parallels:**

- Requires Parties to ban or severely restrict
- Information important throughout the Convention
- Dialogue and exchange between Parties
- Handling products and articles

# Stockholm and wastes

- **Article 5: measures to reduce or eliminate releases from unintentional production**
  - **waste management practices recognised as a potentially important source (Annex C)**
- **Article 6: measures to reduce or eliminate releases from stockpiles & wastes**
  - **treatment of wastes, including products and articles on becoming wastes, consisting or, containing or contaminated with POPs chemicals**

# Article 5 & Annex C:

## Measures to reduce or eliminate releases from unintentional production

**Preventing** POPs waste arising

- ***Develop*** **action plans**
- ***Promote***
  - **available, feasible and practical measures to achieve realistic and meaningful levels of release reduction or source elimination**
  - **substitute products and processes**
  - **the use of BAT/BEP**
    - **BAT *required* for new sources 4 years after entry into force**

# Waste-related source categories

## Annex C Part II

- Waste incinerators, including co-incineration of municipal, hazardous or medical waste or of sewage sludge
- Cement kilns firing hazardous waste
- Secondary copper, aluminium and zinc production

## Annex C Part III

- Open burning of waste, including burning of landfill sites
- Crematoria and destruction of animal carcasses
- Shredder plants for treatment of vehicles
- Smouldering of copper cables
- Waste oil refineries

# Reducing releases

"…promote available, feasible, practical measures…"

- Improved waste management
- Treatment of residuals and wastes
- Improved flue-gas cleaning
- Low-waste technologies
- Recovery and recycling of wastes

- Good housekeeping
- Improved product quality
- Avoiding use & generation of elemental Cl
- Less hazardous raw materials
- Process changes – e.g. closed systems
- Process modification – e.g. to improve combustion

# Integrated approach to wastes

- Source reduction – by design, e.g. IPPC
  Products 'on loan' – 'Chemical Leasing'
- Re-use
- Recycling
- Waste combustion & cogeneration
- Composting
- Landfilling + gas generation
- Integrated planning of landfill & mineral extraction (eg brick clays)

Integration with national initiatives on wastes, power & planning

# Article 6:

## Measures to reduce or eliminate releases from stockpiles and wastes

- Stockpiles
- Wastes
- Contaminated sites
- Linkage to Basel Convention

# Stockpiles

Article 6 Paragraph 1 (a), (b), (c)

- *Develop* strategies to identify POPs stockpiles, & products in use
- *Identify* POPs stockpiles & products in use
- *Manage* POPs stockpiles in an environmentally sound manner

# Wastes
## (& products and articles upon becoming wastes)

Article 6 Paragraph 1 (a), (d)

No *identify* here but implied in the next point

- *Develop* strategies to identify POPs wastes
- *Handle, collect, transport & store* wastes in an environmentally sound manner
- *Dispose*
  - so that POPs content is destroyed or irreversibly transformed
  - In an environmentally sound manner if destruction not preferred
  - in a way that does not lead to recovery, recycling, reclamation, or reuse of POPs
- *Transport* POPs wastes across international boundaries according to international rules

Art 5

# Paragraph 2 of Article 6

- **Stockholm CoP to cooperate closely with Basel CoP to:**
  - **Establish levels of destruction and irreversible transformation to ensure that POPs characteristics are not exhibited**
  - **Determine what methods constitute environmentally sound disposal**
  - **Define "low POPs content" for purposes of environmentally sound disposal**

# Waste guidelines

- Developed through Basel OEWG subgroup
- Adopted by Basel Convention CoP October 2004

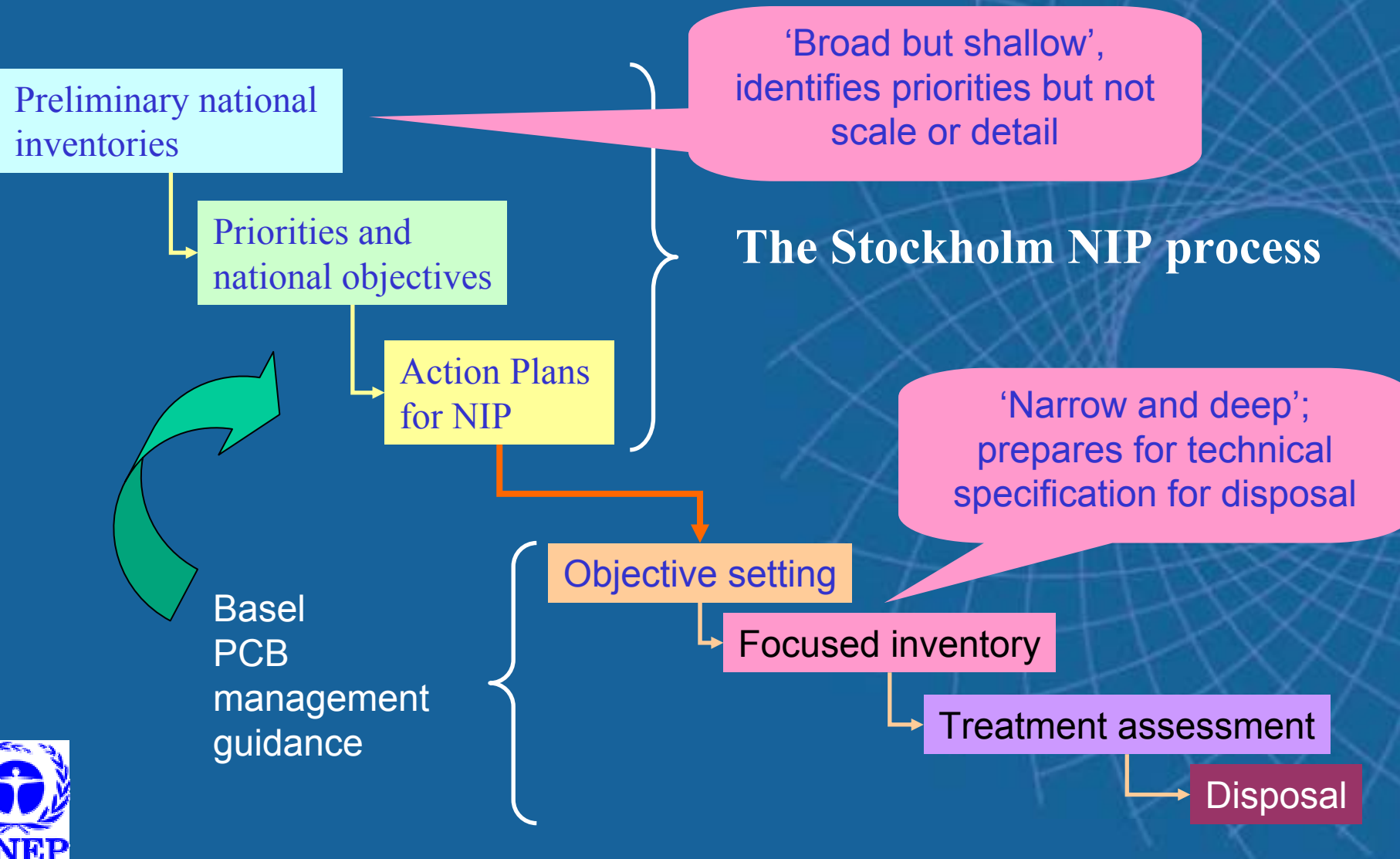
**Stockholm Convention Secretariat is requested:**

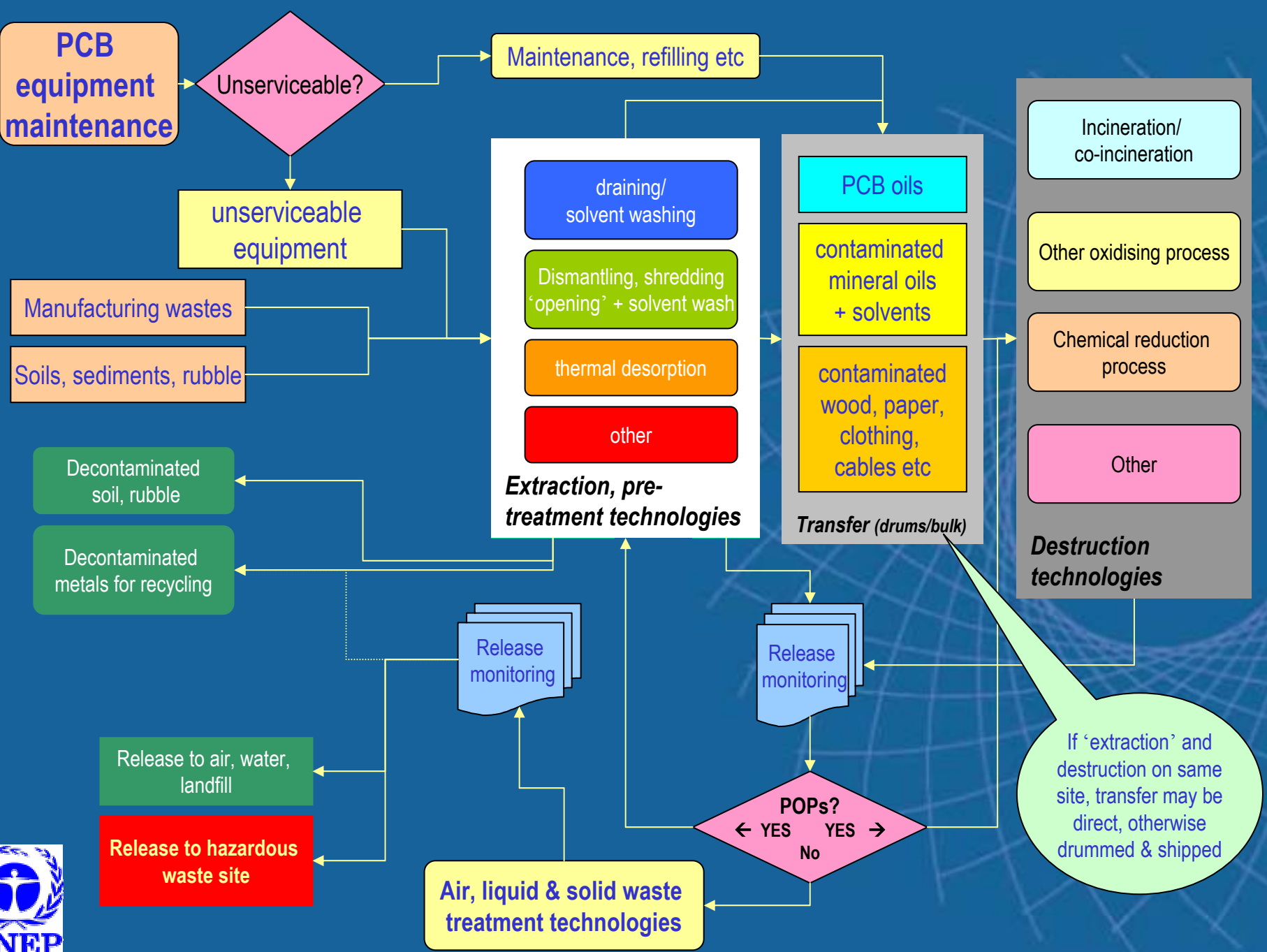
- to prepare a report on such guidelines relating to POPs as may be adopted by the CoP to the Basel Convention,
- analyse the implications of those guidelines for the Stockholm Convention
- indicate elements that might be considered suitable for adoption under paragraph 2 of Article 6 of the Stockholm Convention.

# PCB objectives

- Ensuring that PCBs in use remain in responsible hands
- Orderly removal from use
  - an integral part of business planning
  - Government an important owner of PCBs
- Environmentally sound destruction
- Prevention of further contamination

# PCBs – Inventories & Action Plans




PCB equipment maintenance
Unserviceable?
Maintenance, refilling etc
unserviceable equipment
Manufacturing wastes
Soils, sediments, rubble
draining/ solvent washing
Dismantling, shredding 'opening' + solvent wash
thermal desorption
other
Extraction, pre-treatment technologies
PCB oils
contaminated mineral oils + solvents
contaminated wood, paper, clothing, cables etc
Transfer (drums/bulk)
Incineration/ co-incineration
Other oxidising process
Chemical reduction process
Other
Destruction technologies
Decontaminated soil, rubble
Decontaminated metals for recycling
Release monitoring
Release monitoring
Release to air, water, landfill
Release to hazardous waste site
POPs?
YES
YES
No
Air, liquid & solid waste treatment technologies
If 'extraction' and destruction on same site, transfer may be direct, otherwise drummed & shipped

# SAICM

- **has a broad scope, covering, but not limited to:**
  - **Environmental, economic, social, health and labour aspects of chemical safety, and**
  - **Agricultural and industrial chemicals,**
  - **with a view to promoting sustainable development and covering chemicals at all stages of their life cycle, including in products**
- **should**
  - **take account of instruments and processes already developed**
  - **be flexible enough to deal with new ones without duplicating efforts, in particular the efforts of forums dealing with the military uses of chemicals**

# Financing SAICM

- **"SAICM shall have clearly identified financial mechanisms … responsible for offering the required support for the achievement of the goals agreed."**

- **"… existing global financial mechanisms, such as the Global Environment Facility, should be used, or further developed, to ensure that actions regarding the sound management of chemicals and hazardous waste have the possibility of funding through existing mechanisms."**

# SAICM Objectives

- Risk reduction
- Knowledge and information
- Governance
- Capacity building & technical cooperation
- Illegal international traffic

# SAICM Areas

- Socio-economics
  - Groups at risk
  - Pesticides
  - Stakeholder participation
  - Protected areas
- Industry
  - Risk reduction & worker safety
  - Information & hazard data generation
  - Cleaner Production & Chemical Leasing
  - Trade & movement
  - Liability & compensation
- Government
  - International agreements, Policy & operational measures
  - Trade controls
  - Information & PRTR
  - Emergency response
  - Wastes & remediation
- Chemicals in focus
  - Highly toxic pesticides
  - Lead in fuel
  - Persistent bioaccumulatives, Carcinogens, mutogens and reproductive toxins (CMRs), Endocrine disruptors, Heavy Metals

# SAICM: learning from the others?

- Consistent and predictable processes
- Integration and cost effectiveness
- Existing structures, instruments and mechanisms
- A ‘lightweight’ plan of action, rather than a formal Convention
- Financial mechanisms
- Filling in the gaps

# National Profiles

- Understanding who has responsibilities and for what
- Clarifying stakeholder coordination for action planning
- Revealing gaps in current management
- Highlighting resource needs

# Conclusions

- **Opportunities & benefits for**
  - **Integration**
    - **towards efficient and effective operation**
    - **not just between Conventions but with national policies and initiatives**
  - **Informed trade & movement of products and wastes**
  - **Minimising the burden of Governments**
  - **Enhancing the performance of industry**
  - **Reducing risks to humans & the environment**

# Thank You

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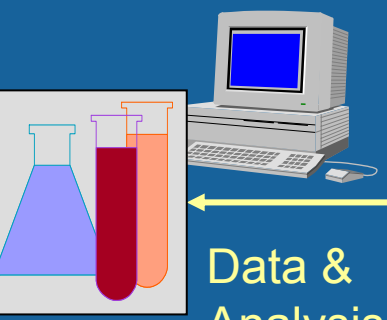
# Efficient & effective MSWM

- Reduction of waste volumes
- Separation at source
- Optimised collections systems
  - Transfer stations & compaction/treatment to reduce transport networks
  - Dedicated collections & matched vehicles
- Minimised environmental impacts of disposal
- *Increasing value from waste uses*
- Business efficiencies from private sector involvement
- Charging regimes to waste generators

# Cost factors

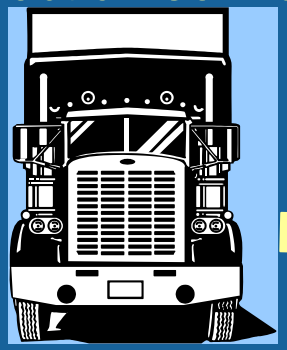
- Transport & handling
- Composition of waste
- Collection costs
  - per household similar
  - costs per tonne very different
- Collection methods for source-separated fractions very different
- Collection & sorting systems labour intensive;
  - opportunities for reprocessing industries?
- *Value of materials 'reclaimed'*

# Waste industry opportunities



Data & Analysis services

Collection services



Incineration


cogeneration of heat & electricity

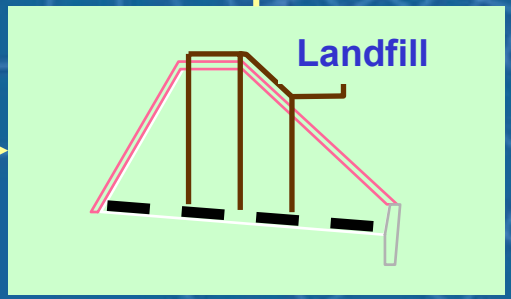
**Waste agencies & contractors**

Treatment

Re-use & recycling to industry

Composting

Design
Build
Operate




$CH_4$ generation