



**unitar**

United Nations Institute for Training and Research

# How to implement an industrial chemicals management plan

February 2015

Chemicals and Waste Management Programme, UNITAR

# Outline

- Background
- Steps to implementing industrial chemical management national plan
- UNITAR's support to industrial chemicals management
- Case study

The background features a vibrant, multi-colored swirl pattern transitioning from yellow and orange on the left to blue and green on the right. Overlaid on this is a faint, semi-transparent grid of text in a sans-serif font. The text includes terms such as 'ownership, transfer, expertise, responsiveness, leadership, approach, methodology, research on knowledge systems, technologies, capacity, learning by doing, networking, skills building, methodology, training, research on knowledge technologies, doing, skills building'.

# **Background**

## **Global Perspective**

# Review of selected international & national regulatory instruments & initiatives



- . International code of conduct on the distribution & use of pesticides
- . Responsible Care - ICCA
- . Registration, Evaluation and Authorization of Chemicals REACH
- . US Toxic Substances Control Act (1974)
- . Canadian Environmental Protection Act (1999)

# International code of conduct on the distribution and use of pesticides

- . FAO leads the initiative – IGOs, natl. Govts, NGOs & CropLife
- . Objective: human health, environment & sustainable agriculture
- . Voluntary std & point of reference for SMC
- . Addresses the distribution and use (no manufacturing)
- . Emphasises shared responsibilities- importing & exporting govts
- . Cooperation is the key feature - Govts,FAO & Industry

knowledge, international, participatory approach, r  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
ship, skills building  
ing, ext

# Responsible Care - ICCA



- . Global chemical industry (voluntary initiative)
- . National associations & governments
- . Objective:
  - health
  - safety
  - Environment

knowledge, international, participatory approach, m  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
ship, skills building  
ing, ext

# Responsible Care



- . Responsible Care Global Charter
  - emphasis on product stewardship
  - has nine key guiding elements for long term safe use of chemicals
- . Compliments national and international legislation
- . Supports SMEs to keep them up to date with legislative devlpt
- . Industry driven, imposes no sanctions & little checks & balances
- . Not available in many developing countries

knowledge, international, participatory approach, r  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
-ship, skills building  
-ing, ext

# Registration, Evaluation and Authorization of Chemicals

## REACH

- Protection of human health & environment
- Assesses both new & old chemicals (no data for >1 ton, no market)
- Companies that manufacture or import more than one metric tones of chemicals are required to register in the central database
- The burden of proof is with the industry
- Industry required to:
  - develop risk information,
  - conduct risk assessment, and
  - determine risk mgmt needs and adequacy.
- Government plays an oversight role



# US Toxic Substances Control Act (1974)

- . TSCA (1974) principal law regulating industrial chemicals:
- . Provides the US EPA with authority to require:
  - reporting, record keeping & testing & restrictions
  - tracks production, importation, use & disposal of specific industrial chemicals
  - Maintains a database on toxic chemicals
  - Requires companies to notify the EPA before starting the manufacturing process of new chemicals
  - The burden of proof is with the EPA

# Canadian Environmental Protection

- Canadian Environmental Protection Act, 1999:
  - Principal tool for preventing & mgt risks posed by toxic substances
  - Assessed 23,000 substances for risks to environment & human health (DSL)
  - Priority list 200 substances, 4000 substances require further attention
  - 100kg/yr triggers reporting for importing & manufacturing
  - requires the chemical companies to notify regulatory authorities only after a new chemical has reached a certain levels of manufacture or importation
  - Assessed substances can be manufactured or imported or used on commercial scale
  - Burden of proof is on government

knowledge, international, participatory approach, m  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
ship, skills building  
ing, ext

# Developing countries & CITs – Industrial chemicals management regulatory status

- . OECD reports increased burden by 2020 (prodn & consumpn)
- . Limited and fragmented infrastructure for industrial chemical mgt
- . Health and environmental risks remain high
- . Industrial chemicals remain unregulated in many countries
- . Efforts to address global chemical concerns fragmented
- . Countries lack information critical for management decisions

# Information is crucial for SMC



- . Key steps for regulatory and mgt of industrial chemicals
  - problem identification
  - priority setting
  - risk assessment
  - risk management
  - monitoring and evaluation
- . Informn generation is crucial – CoC, CEPA, TSCA & REACH
- . Simple product registration for a particular sector

knowledge, international, participatory approach, m  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
ship, skills building  
ing, ext

# Attributes of CoC that makes it easily replicated

- CoC guidelines domesticated in many devel. Countries
  - National registration & control scheme
  - Good labelling practice - GHS
  - Compliance and enforcement of a pesticide regulatory prog.
  - Retail distr.- storage and handling
  - Prevention & disposal
  - Reporting system for health & environmental incidents

knowledge, international, participatory approach, r  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
ship, skills building  
ing, ext

The background features a vibrant, multi-colored swirl pattern transitioning from yellow and orange on the left to blue and green on the right. Overlaid on this is a faint, semi-transparent grid of text containing various terms such as 'ownership', 'transfer', 'action', 'learning by doing', 'responsiveness', 'leadership', 'approach', 'methodology', 'research on knowledge systems', 'technologies', 'capacity building', 'networking', 'methodology, training', and 'research on knowledge'.

# **Steps to implementing industrial chemical management national plan**

# Developing national industrial chemicals management plan

- Composed of systematic assembly of policy choices within national context at a given time
- Builds upon and addresses the fundamental elements and situation and gap analysis while giving particular emphasis to priority chemicals
- Must receive high-level endorsement and political commitment
- Subjected to public consultation and information process

# Getting started

- Identify the national lead agency with legislative mandate to lead the process
- Identify national stakeholders that should be involved in the process
- Conduct a baseline study to provide a basis for the development and implementation of the plan
- Conduct the regulatory impact analysis (social and economic impacts)
- Gather experiences from other countries who are starting from a similar point
- Get high-level endorsement to proceed with the development of the plan



# Key steps for developing an industrial chemicals management plan

- Establish the scope of the national plan
- Identify the overarching goal and supporting targets
- Estimate expected national benefits (Cost-benefit analysis)
- Identify financing sources for plan development, capacity building activities during the initial stages of the development process
- Set time lines for the developing the plan and option responsibilities
- Ensure alignment with other national plans and national development agenda

# Stakeholder engagement

- This is a national cooperative undertaking
- Conduct a national stakeholder analysis
- A wide variety of stakeholders need to be engaged throughout the entire process
- Set up national consultative and management bodies such as the national industrial chemicals management coordinating committee.
- Identify who will lead and manage the development of the plan
- Secure political endorsement at an early stage in the process

# Situation and gap analysis

- Detailed examination of the country's starting point
- Focus on wider context and identify relevant national priorities
- Conduct national inventories and characterize the streams
- Establish the current management practices
- Available technical infrastructure and its adequacy
- Legal and regulatory settings and their adequacy
- Available capacities especially in terms of human resources

# Priority setting

- Priority chemicals are identified
- Importers and users identified
- Quantities manufactured, imported, used and exported are identified and quantified
- Investment or funding needs identified

# Elements of the industrial chemicals management plan

- There must be a legal entity in the country of registration
- There should be an industrial chemical register (or all components) must be on the inventory or exempt
- Most inventories are listed by or referenced to CAS numbers
- CAS Number Chemical Abstract Services – a division of the American Chemical Society

# Chemical register/Product registration

- List of products
  - Product specific
  - Industrial vs. Consumer products
- Consumer products may be subject to different/additional requirements
- Hazard Communication – Required for hazardous products in commerce
  - MSDS
  - Labels

# Chemical register/Product registration

- Country requires information prior to import or annual submission of information
  - Occupational health and safety
  - Emergency response and clean-up
  - Consumer protection
  - Provides authority with information about chemicals on the market
- Can be as simple as a MSDS or require more (e.g., composition information)

# Inventories

- Applies to imports and manufactured (or marketed) substances
- Listing can include restrictions
- Most have both public and "confidential" sections
- Confidential listing may require justification, a fee, only last a period of time, require rejustification
- List includes may include:
  - Existing substances (when inventory was initiated)
  - New substances added since inception



# Chemical register/Product registration

- Country requires information prior to import or annual submission of information
  - Occupational health and safety
  - Emergency response and clean-up
  - Consumer protection
  - Provides authority with information about chemicals on the market
- Can be as simple as a MSDS or require more (e.g., composition information)

The background features a vibrant, multi-colored swirl pattern transitioning from yellow and orange on the left to blue and green on the right. Overlaid on this is faint, semi-transparent text in a sans-serif font, including words like 'ownership', 'transfer', 'action', 'learning by doing', 'responsiveness', 'leadership', 'approach', 'methodology', 'research on knowledge systems', 'new technologies', 'capacity building', 'methodology, training', and 'research on knowledge'.

**UNITAR's support to countries  
on development of industrial  
chemicals management**

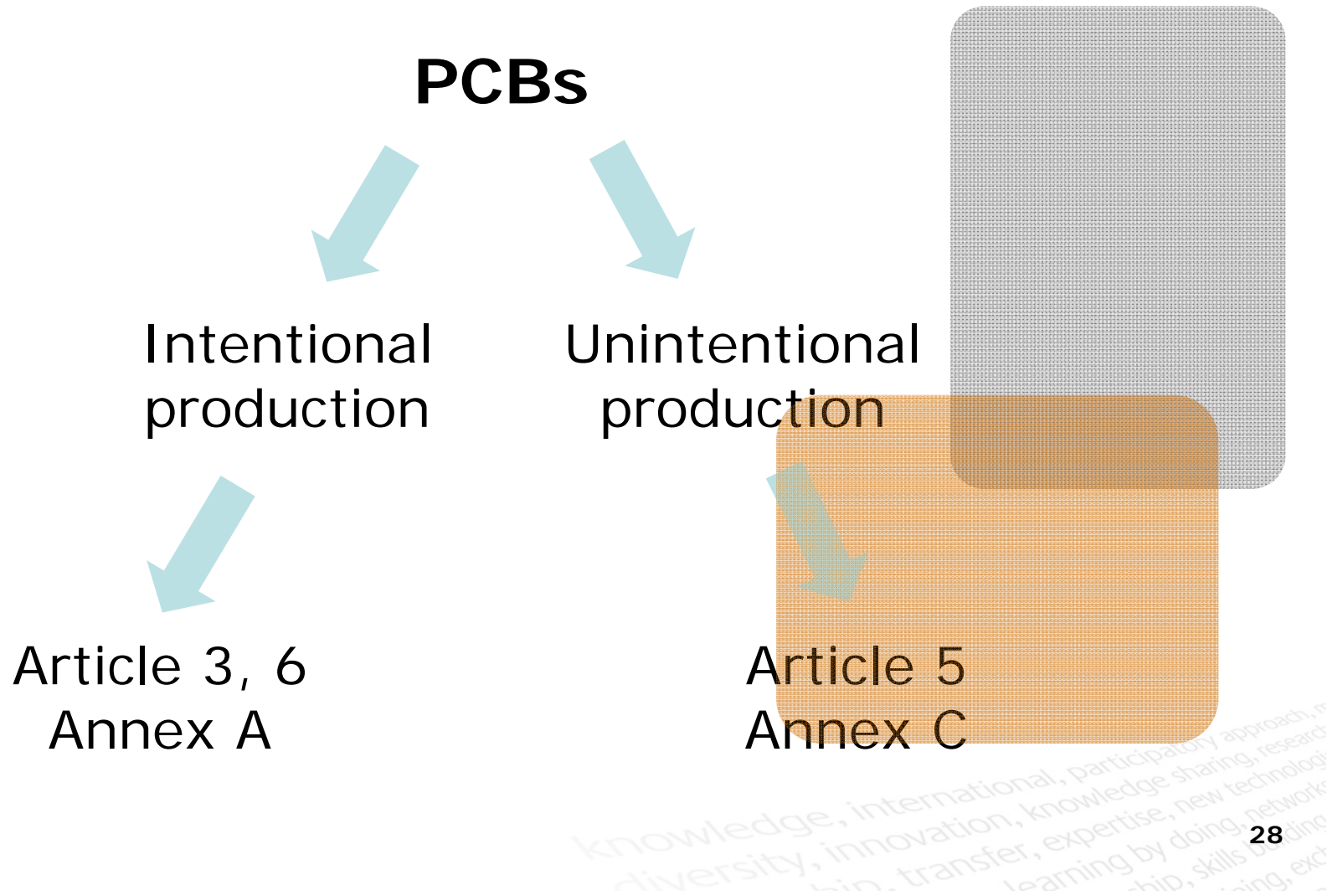
# Case Study - Ghana

UNITAR – National Profile Flag program

- The development of the INP included:
- National Priority Setting Exercise
- Identification of national priority chemicals and hazardous wastes management areas of focus
- Establishment of an inter-agency coordination mechanism and an information exchange mechanism
- Mechanisms for the sustainable financing of the INP

# PCBs in the Stockholm Convention

- Stockholm Convention regulates intentionally and unintentionally produced PCBs



# Intentionally Produced PCBs

## ■ Article 3

- Elimination of production, use, import and export of chemicals in Annex A, including PCBs
- Details on PCBs in Annex A, part I:
  - Production is prohibited
  - Use is restricted in Annex A, part II.

# Intentionally produced

- Use restrictions of Annex A, part II
  - Elimination of use in equipment
    - Identify, label and remove
    - Continuous steps (priorities)
  - Promote measures to reduce exposure and risk of PCBs use
  - Import/export only for environmentally sound waste management
  - All by 2025

# Basel Convention

## The Ban Amendment - (Article 4, 1995)

- Prohibit export of hazardous wastes destined for final disposal from member states to the Annex VII to states not listed in annex VII
- Prohibit export of hazardous wastes destined for recovery and recycling from member states to Annex VII to states not listed in Annex VII

# Rotterdam Convention

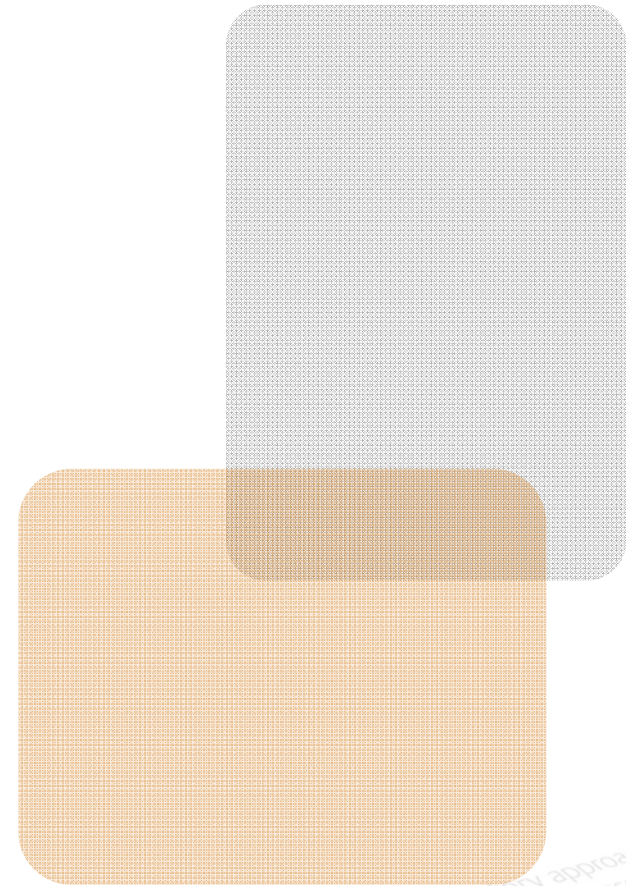
The Rotterdam Convention contains two key provisions relevant to trade:

- Prior Informed Consent (PIC) procedure : mechanism for providing a national decision-making process on import of hazardous chemicals listed in Annex III of the Convention and for ensuring compliance with these decisions by exporting Parties.
- Information exchange : mechanism for the exchange of information among Parties on a broad range of potentially hazardous chemicals.



# Existing Systems in Ghana

- Pesticides legislation
- National profile
- Chemical management committee



knowledge, international, participatory approach, m  
diversity, innovation, knowledge sharing, research  
bin. transfer, expertise, new technology  
learning by doing, network  
-hip, skills building, exch

# Chemicals monitoring system

## ■ Stakeholders

- Customs
- Industry
- EPA
- NGO

## ■ Activities

- Quarterly testing that the system are working
- Provides quarterly reports
- Evaluates success

The background features a vibrant, multi-colored swirl pattern transitioning from yellow and orange on the left to blue and green on the right. Overlaid on this is a faint, semi-transparent grid of text in a light blue color. The text includes terms such as 'ownership, transfer, expertise, transfer, action, learning by doing, responsiveness, leadership, skills building, approach, methodology, training, research on knowledge systems, new technologies, capacity building, learning by doing, networking, leadership, skills building, methodology, training, research on knowledge systems, new technologies, capacity building, learning by doing, networking, leadership, skills building'.

# **UNITAR's support to industrial chemicals management**

# Activities and resources

- Training – tailor made and general but all focused on capacity building purposes for SMC
- Supports the development of national profiles which are key ingredients of the SMC
- Supports the development of national management plans and strategies for SMC and wastes
- Capacity building activities can be aligned with the priority chemicals of concern such as PCBs, Mercury or programs such GHS
- Resources:
  - <http://iomctoolbox.oecd.org>
  - Guidelines for National Waste Management Strategies & others

# Thank you

**Chemicals and Waste Management  
Programme  
United Nations Institute for Training  
and Research (UNITAR)  
Palais des Nations  
1211 Geneva 10**

**Tel: +41 22 917 1234  
Fax: +41 22 917 8047  
Email: [cwm@unitar.org](mailto:cwm@unitar.org)**



United Nations Institute for Training and Research  
Institut des Nations Unies pour la Formation et la Recherche  
Instituto de las Naciones Unidas para Formación Profesional e Investigaciones  
Учебный и научно-исследовательский институт  
Организации Объединенных Наций  
معهد الأمم المتحدة للتدريب والبحث  
联合国训练研究所



**unitar**

United Nations Institute for Training and Research

Palais des Nations  
CH-1211 - Geneva 10  
Switzerland  
T +41-22-917-8455  
F +41-22-917-8047  
[www.unitar.org](http://www.unitar.org)