



# **Chemicals: Future Trends in Production and Use.**



## **Implications for Chemicals Management**

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**May 3, 2011**



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- and at the start of the decade there was no such thing as Facebook & YouTube!



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## MY POINT IS:

THERE IS A NEVER ENDING TORRENT OF INNOVATION  
WHICH LEADS TO NEW PRODUCTS WHICH CONSUMERS  
BUY DIRECTLY OR INDIRECTLY, ALL OF WHICH ARE  
ENABLED BY **CHEMISTRY**





## TRENDS IN CHEMICALS PRODUCTION & USE

- Chemicals production and use is now a globalized industry
- Low cost feedstocks in Middle East drove migration of new capacity for petrochemicals production from NA/WE/Japan to Saudi Arabia/Kuwait etc.
- Fast-growing markets in developing countries attracted investment by global chemical companies, particularly in China and India.
- In addition down-stream chemical users invested in these developing countries attracted by lower manufacturing costs to serve local and export markets.
- Latest emerging trend for commodity petrochemicals is the increased long term & cost-competitive natural gas supply in USA leading to investment in new production capacity.
- A much greater focus on the use of chemicals in the supply chain through voluntary and regulatory activities will require a significant emphasis on a total life cycle approach including end of life involving all actors in the chain.



## Misconceptions propagated about Chemicals Management Challenges

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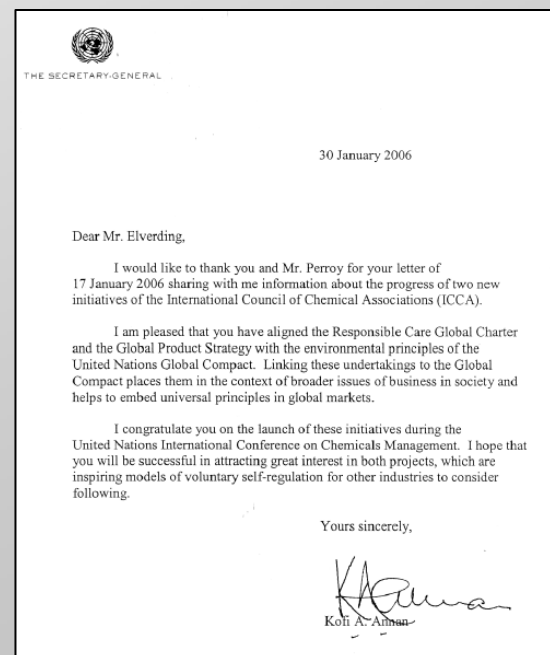
- More than 80,000 chemicals in commerce
- Industry has inadequate knowledge on hazards and exposure
- Downstream users of chemicals, and especially consumers cannot make informed decisions without access to information.
- Too much reliance on ineffective exposure control and not enough emphasis on reducing hazard through substitution.
- All of these problems are “worse” in developing countries

**Improve Chemicals Management:** SAICM Framework



## ICCA is accelerating industry progress

- At ICCM-1 (Dubai, 2006) ICCA introduced two voluntary initiatives,
  - **Responsible Care Global Charter (RCGC) and**
  - **Global Product Strategy (GPS)**
- To improve sound management of chemicals globally
- All major chemical companies accepted the obligation to put RCGC and GPS into practice
- External review process through ICCM's (2012 / 2015 / 2018)





## ICCA Strong Commitment to SAICM

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GPS and Responsible Care are the cornerstones of industries contribution, but ICCA is also:

- Partnering with UNEP on projects that contribute to SAICM implementation (Memorandum of Understanding)
- An active participant in intersessional SAICM work (e.g. dialogues on chemicals in products, financing, nanotechnology, QSP Ex. Board)
- Committed to report progress against SAICM parameters (BER)
- Seeking new ways to engage with other SAICM stakeholders (e.g. NGOs) on projects to advance SAICM objectives

**Partnership in Focus:** Joint activities in strategic areas



## Advantages / Strength of SAICM

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- SAICM as an innovative model of how multi-stakeholder frameworks can help advance sustainable development objectives.
- Public-private partnerships to supplement inter-governmental activities and act as a catalyst for improved implementation.
- Ensuring that regulatory frameworks are adopted to integrate chemicals management into national development plans
- Enhance capacity building and technical cooperation to address the lack of capacity in parts of the developing world

## Global Product Strategy – Tools for Success



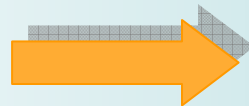
**Promote knowledge  
and skills transfer**



**Training Workshops  
Guidance materials  
GPS Network of experts**



**Improve the availability  
of information**



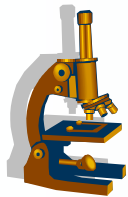
**Base Set of Information  
GPS Safety Summary  
Web-based IT-Portal**



**Increase awareness on  
chemical management**



**ICCA Principles for  
Chemical Management  
Systems**



**Research on existing  
and emerging issues**



**ICCA Long Range  
Research Initiative (LRI)**



## ICCA / UNEP Memorandum of Understanding

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- The MoU outlines joint activities in strategic areas such as:
  - Sound Management of Chemicals
  - Chemical Accident Prevention & Responsible Production
  - Responsible Care and the Global Product Strategy
  - Harmonization of Chemicals Management Systems
- To be delivered through capacity building, value chain outreach and stakeholder dialogue.
- A joint steering group will manage activities and pilot projects.

**Partnership in Focus:** Strengthen Governance



## ICCA Response – By 2020, ICCA will have:

- Established a base set of hazard and exposure information adequate to conduct safety assessments for chemicals in commerce.
- Improved global capacity to implement best practices in risk assessment and chemicals management, especially in developing countries.
- Shared relevant product safety information with co-producers, governments and the public.
- Worked across the value chain so that suppliers and customers can effectively evaluate risks and enhance their performance across the product lifecycle.





## Conclusions

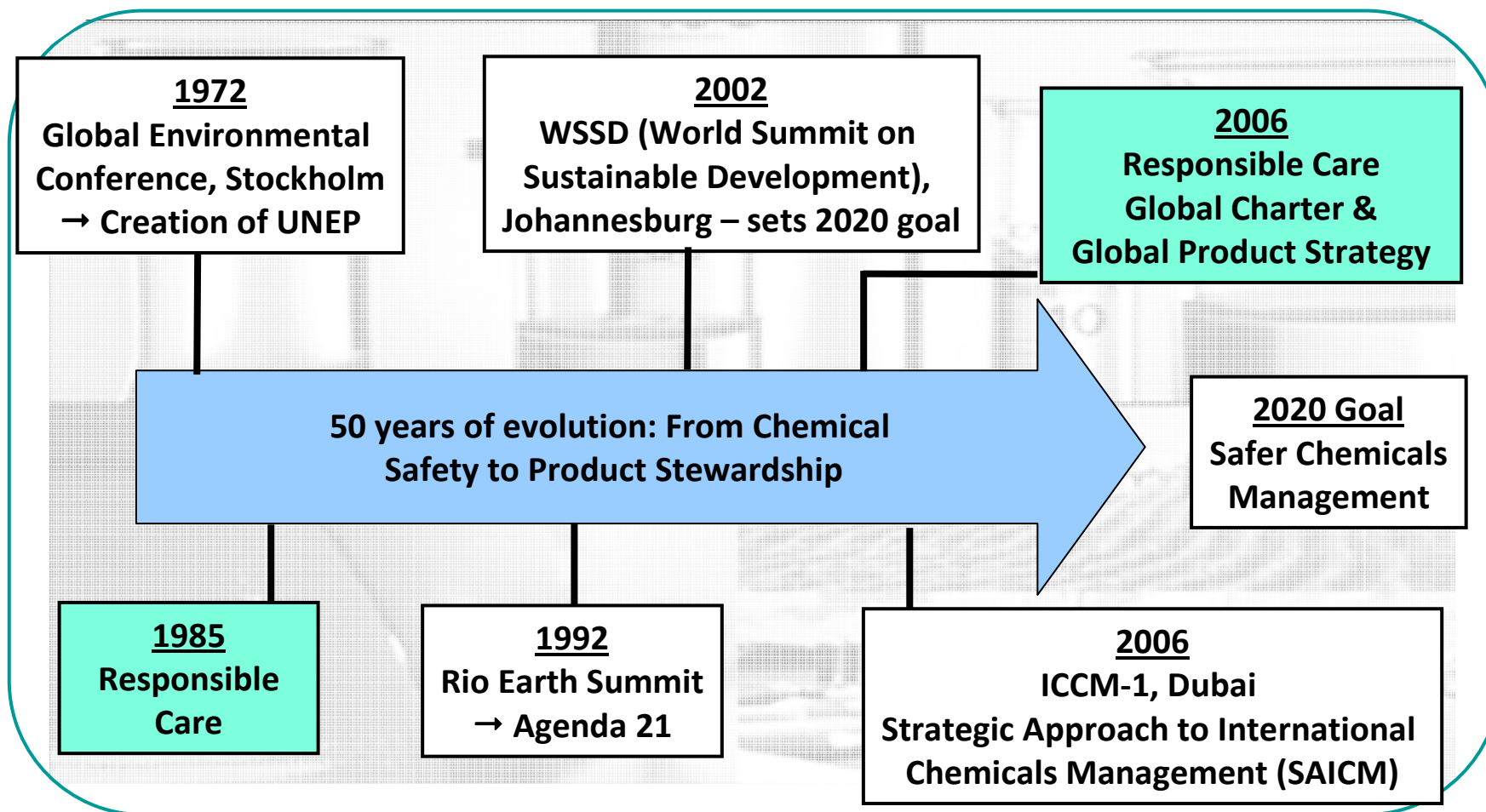
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- ICCA remains committed to the WSSD 2020 goal and supports further strengthening of SAICM as multistakeholder framework to achieve this objective
- The global chemical industry has a critical contribution to make in enhancing chemicals management worldwide via Responsible Care<sup>®</sup> and the Global Product Strategy
- ICCA continues to pursue opportunities for collaboration with other stakeholders
- A balanced combination of regulations and voluntary initiatives can achieve safe management of chemicals



## BACK-UP SLIDES

# Societal evolution – Towards Sound Management



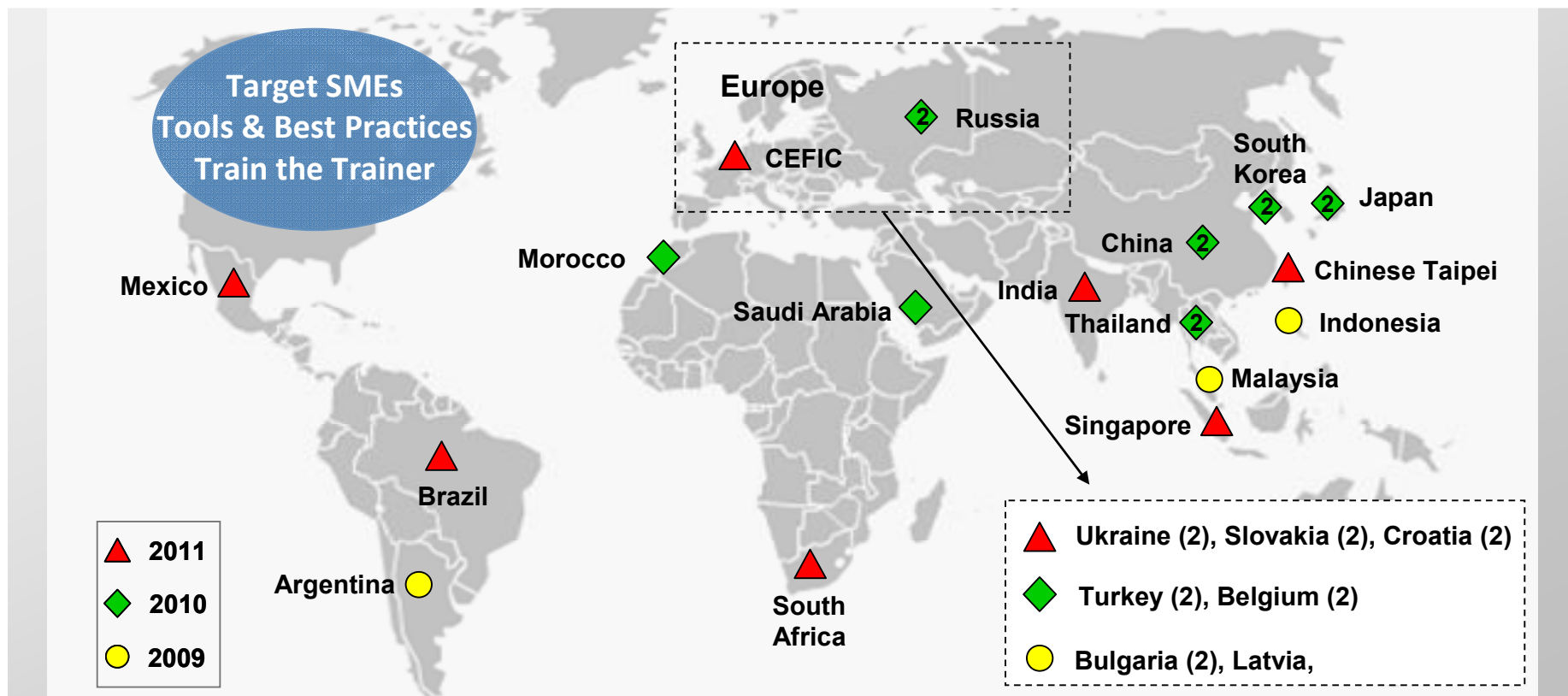


## Promote knowledge and skill transfer

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- **Longer-term capacity building efforts** to improve competency of SMEs and developing countries. Specialists from leading chemical companies provide training and knowledge transfer.
- **Comprehensive set of guidance materials** for risk assessment and risk management. This guidance particularly addresses small and medium sized enterprises in developing economies.
- **ICCA GPS network of experts**, who will answer technical questions about risk assessment or on GPS safety summaries.

# ICCA Capacity Building Workshops



**SMEs In Focus:** Capacity building and technical cooperation

## Improve Industry Performance – GPS Guidance

### Section One: Preparation

- **Step 1:** Select chemicals for assessment
- **Step 2:** Gather information
- **Step 3:** Prioritize chemicals into Tiers
- **Step 4:** Develop Tier information

### Section Two: Implementation

- **Step 5:** Characterize Hazard
- **Step 6:** Assess Exposure
- **Step 7:** Conduct Risk Characterization
- **Step 8:** Document Safety Summary



**SMEs In Focus:** Risk Reduction



## Improve the availability of information

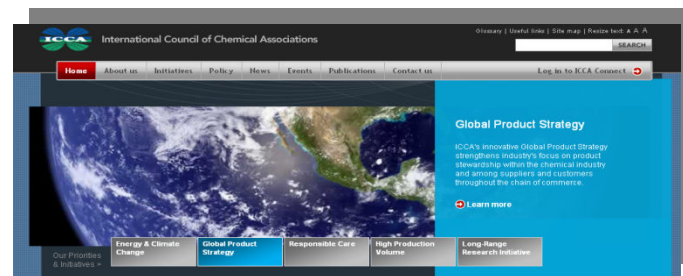
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- A **Base set of information** is gathered for chemicals placed on the market. Relevant information for risk assessment will be made available to minimize unnecessary animal testing.
- Furthermore, to promote greater transparency, companies will provide information about marketed substances, in an easily understandable format (**GPS Safety Summary**)
- **Web-based IT-Portal** to make relevant information collected under GPS publicly available. All interested stakeholders will have open access to this portal.

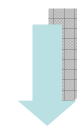


# Improve Exchange of Information – GPS IT Portal

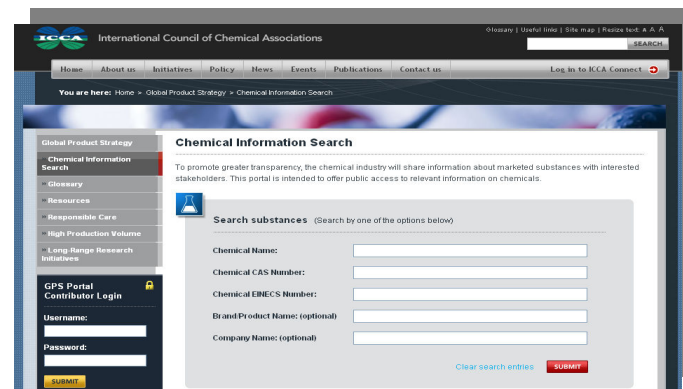
- Free public access to relevant information on chemicals and products for all stakeholders.
- Companies initially provided >1600 GPS Safety Summaries. More to be available e.g. within 1 year after the respective REACH Tier deadline.
- The official public launch took place on 4th October 2010.



ICCA Website



GPS Info Search



**Public In Focus:** Improve knowledge and information





## Increase awareness on chemical management

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- National chemicals policies should be based on common principles to foster consistency and transparency in regulatory systems

### **“Principles for Chemical Management Systems”**

- » Science and risk-based decision making
- » Tiered, intelligent risk-based approach to chemical evaluations
- » Leveraging existing information to reduce animals and testing
- » Transparency and shared responsibility along the value chain
- » Improved public confidence in chemical policies



## Policy Options to Address Constraints & Barriers

- Further strengthening of SAICM as an innovative model of how multi-stakeholder frameworks can help advance sustainable development objectives.
- Public-private partnerships to supplement inter-governmental activities and act as a catalyst for improved implementation.
  - » e.g. UNEP Senior Experts Resource Group under SAICM.
- Ensuring that chemical regulatory frameworks adopted as part of efforts to integrate chemicals management into national development plans:
  - » Promote science and risk-based decision making, and leverage existing information to reduce animal testing.
  - » Promote transparency in ensuring that relevant product safety information is shared with producers, suppliers and end-users.
  - » Emphasize shared responsibility across the supply chain to build public confidence that chemicals are managed safely throughout their lifecycle.



## Policy Options to Address Constraints & Barriers

- Ensure that policy frameworks facilitate rather than hinder the deployment of products and technologies that contribute to sustainable and innovative solutions to current challenges.
  - » This includes enabling technologies that promote greener outcomes.
- Enhance capacity building and technical cooperation to address the lack of capacity in parts of the developing world to effectively manage chemicals.
  - » Since 2008, ICCA has held over 30 capacity building workshops to assist industry (and SMEs in particular) with implementing best practices in chemicals management.
  - » ICCA is also working with UNEP under the ICCA-UNEP MOU on plans for new capacity building initiatives targeted at areas of greatest need.