



ICCA Global Product Strategy (GPS)

ABIQUIM Responsible Care Congress

Sao Paulo, Brazil

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The Dow Chemical Company

Co-Chair ICCA CP&H Leadership Group



Agenda

- Why GPS and What Value Does it Bring?
- ICCA Chemicals Policy and Health Leadership Group
 - » Pilot of the GPS Risk Assessment Guidance
 - » Product Safety Summaries
 - » ICCA GPS IT Portal
 - » Capacity Building Workshops
 - » Implementation Progress, Challenges and Available Help
 - » UNEP Partnership
 - » NGO Engagement
- GPS Implementation Challenges and Available Help

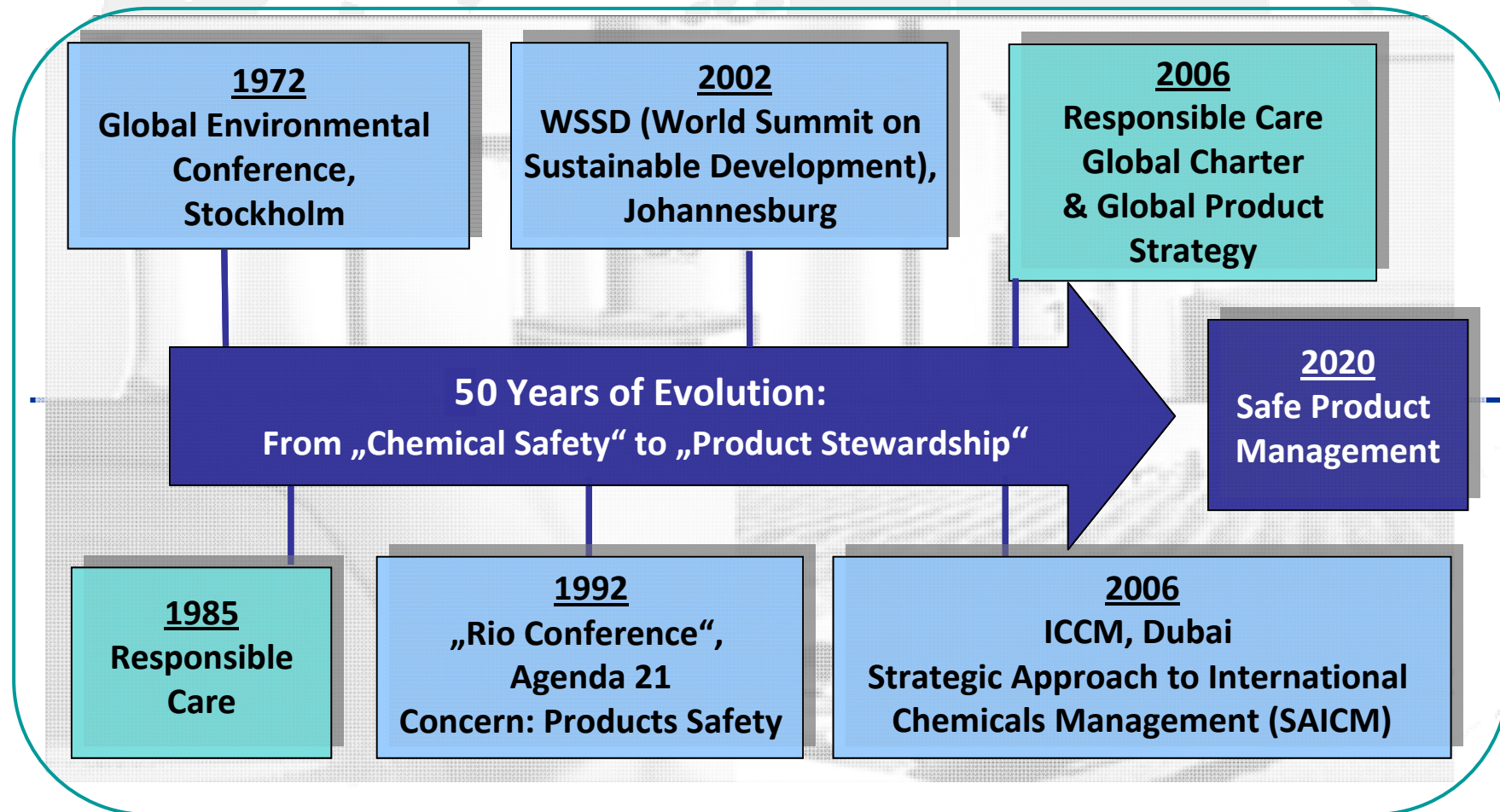


Government/NGO/Public Concerns About Chemicals

- There are more than 80,000 chemicals in commerce and we know little about the hazards of most of them.
- The chemical industry has inadequate knowledge on how its products are being used.
- Downstream users of chemicals, and especially consumers have insufficient knowledge on their hazards.
- There is 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.



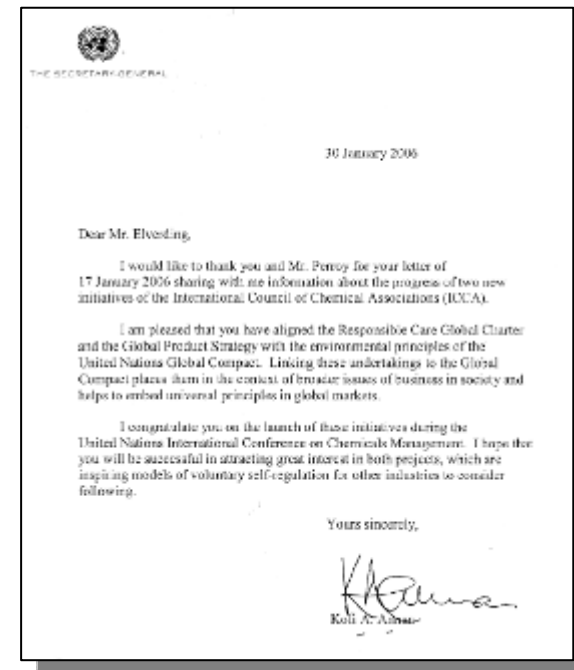
Societal evolution – Towards Sound Management





ICCA Must Deliver on its GPS Commitment!

- GPS as an essential element of Product Stewardship performance is critical to the reputation of the chemical industry
- GPS was launched at the Dubai UNEP conference in Feb. 2006 to increase public confidence
- All major chemical companies accepted the obligation to put GPS into practice
- ICCA committed GPS as contribution to the SAICM process and received first positive feedback by UN
- External review process through ICCM's (2009 / 2012 / 2015 / 2018)



.... Challenged to accelerate industry progress!



Global Product Strategy - Contribution to SAICM

Strategic Approach to International Chemicals Management (SAICM)

Responsible Care Global Charter

5. Enhance the management of chemical products worldwide
(Product Stewardship)



Global Product Strategy (GPS)

1. Develop global stewardship guidelines
2. Develop a system for implementation
3. Define risk-based assessment process
4. Improve flow of information
5. Partnership with inter-governmental organizations and stakeholders
6. Share relevant information between industry and with public
7. Research to close data gaps and identify emerging issues
8. Communicate GPS (internal / external)
9. Develop global advocacy principles



Value of GPS to the Global Chemical Industry

- Need to improve product stewardship/product safety performance in the global industry and, in turn, improve public confidence in chemicals.
- Globalization of markets requires improved harmonization of chemical management systems at national, regional and worldwide level.
- A harmonized global standard would improve environmental and health protection throughout the value chain, including consumers.
- Differences in national regulatory requirements lead to increase in costs / time and to distortions in international competition and trade restrictions.
- GPS is a best practice example which can serve as a basis for the revision of existing and new regulations, particularly in developing countries.
- GPS fulfils the requirements of a modern chemical management system.



Improve Industry performance – Base Set of Information

- A base set of information is needed to perform a credible job on the GPS safety assessment
- Similar to the US EPA and ICCA High Production Volume chemical programs concept.
- Helpful to companies that lack expertise -- permits gaps to be filled through alternatives to animal testing
- The "base set" constitutes a best practice for the industry, helps to shape management systems in developing countries

GPS – Leveraging Other Work

Global Product Strategy (GPS)

◆ Regulatory initiatives

- EU REACH
- US TSCA
- US ChAMP
- Canadian DSL
- Japan CSR
- GHS
- etc.

◆ Voluntary initiatives

- Responsible Care
- ICCA HPV
- Base Set of Information
- OECD / SIDS
- LRI
- etc.

◆ Cooperation

- UNEP
- UNIDO
- OECD
- NGOs
- ICCA internal
- etc.

Globally consistent approach that accommodates national, historical, cultural and regulatory differences



GPS – Product Safety Summaries

- Improved access to hazard, exposure and risk information to and for better risk management improve transparency decisions.
- Relatively easy for the public to comprehend.
- Flexibility to meet regional needs.
- Currently more than 1300 GPS Safety Summaries are already available on company websites (<http://reporting.responsiblecare-us.com/Search/PSSummarySearch.aspx>)
- Do NOT replace Safety Data Sheets





Dow Product Safety Website

Dow

Worldwide MyAccount@Dow
Hu search GO

PRODUCTS AND SERVICES INVESTOR RELATIONS OUR COMPANY NEWS CENTER SUSTAINABILITY INNOVATION CAREERS

Product Safety

"At Dow, protecting people and the environment is part of everything we do and every decision we make."
-Dow Environment, Health and Safety Policy

Overview

Product Safety Assessment

Industry Standards

Safety & Handling

Chemical Testing

Frequently Asked Questions

Contact Us

Product Safety - Dow Employees Apply Chemical Risk Policy

Product Safety

Dow employees consistently apply this policy to the identification and management of chemical risks to ensure product safety.

Recent Headlines

Fourth Quarter Progress Report Shows Improvements in 2015 Sustainability Goals Implementation

Product Safety Assessments Launched on www.dowproductsafety.com

[Product Safety Assessment Finder](#)

[Scientific Publications and Presentations](#)

Dow Product Safety (<http://www.dowproductsafety.com>)



Example of a Dow Product Safety Assessment



Product Safety Assessment: Toluene Diisocyanate

Product Safety Assessment

Toluene diisocyanate

Select a Topic:

- [Names](#)
- [Product Overview](#)
- [Manufacture of Product](#)
- [Product Description](#)
- [Product Uses](#)
- [Exposure Potential](#)
- [Health Information](#)
- [Environmental Information](#)
- [Physical Hazard Information](#)
- [Regulatory Information](#)
- [Additional Information](#)
- [References](#)

Names

- CAS No. 26471-62-5 Mixed isomers
- CAS No. 91-08-7 2,6-TDI
- CAS No. 584-84-9 2,4-TDI
- Toluene diisocyanate
- TDI
- 2,4-Toluene diisocyanate
- 2,6-Toluene diisocyanate
- 1,3-Diisocyanatomethyl-benzene
- 2,4-Diisocyanatomethyl-benzene
- VORANATE™ T-80 TDI

Product Overview

- Toluene diisocyanate (TDI) is a reactive chemical. TDI's isocyanate groups ($-N=C=O$) can be reacted with polymers that have alcohol ($-OH$) groups to make polyurethanes.¹
- TDI-based products are commonly used in automotive seating, furniture foam applications, mattress cushioning and specialty foam applications.² See [Product Uses](#).
- TDI is produced in closed systems with stringent process controls, which reduces the potential of workplace exposure. Consumers may be exposed to TDI via "do-it-yourself" applications in the United States (U.S.).³ See [Exposure Potential](#).

Product Description

TDI is a colorless to pale yellow liquid with a pungent odor. TDI can have different forms or isomers. TDI isomers have the same chemical formula $C_9H_8N_2O_2$, but the atoms are arranged differently. So, the term "TDI" represents the isomeric compounds along with mixtures of these isomers. The two commonly used isomers of toluene diisocyanate are 2,4-TDI and 2,6-TDI. Mixtures of 80% 2,4-TDI and 20% 2,6-TDI represent over 95% of the industrial usage,¹⁰ although TDI is commercially available in the following ratios:

- 100% 2,4-TDI
- 80% 2,4-TDI, 20% 2,6-TDI
- 65% 2,4-TDI, 35% 2,6-TDI

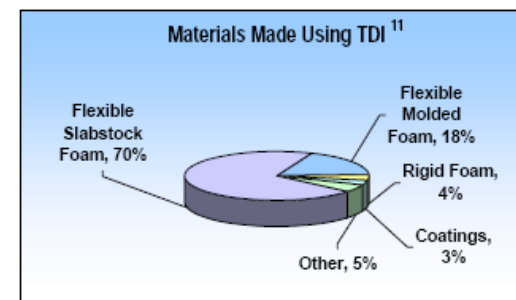
Dow currently sells VORANATE™ T-80, which is an 80/20 mixture of the 2,4 and 2,6 isomers, respectively.

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Product Uses^{11,12}

TDI is commonly used to manufacture:

- Flexible foams – used for the fabrication of bedding, furniture, automotive seating, flexible packaging and carpet underlay; this is the largest market application for TDI
- "Foamed-in-place" polyurethane plastics – ranging from soft and sponge-like to hard and porous for use in furniture, packaging, insulation and boat building
- Polyurethane coatings – used on leather, wire, tank linings and masonry
- Elastomers – used to produce adhesives, films and linings, and abrasive wheels and other mechanical items that require abrasion and solvent resistance
- Rigid, "pour-in-place" foams – for use in appliances, and, in smaller amounts, packaging
- Urethane sealants – used in construction applications





Scope of GPS Risk Assessment – What about products / mixtures ?

- Product Safety Summaries are expected for products in commerce (i.e., pure substances or mixtures of chemical substances).
- Products are evaluated by the risk of their most hazardous chemical constituents.
- Companies can utilize work already completed under the OECD SIDS program, the HPV Program, REACH, GHS or the EPA IUR reporting programs etc. – all of which are chemical-specific.
- Product safety summaries are **OPTIONAL** for purchased raw materials, wastes, R&D samples or non-isolated, non-transported intermediates.





GPS Risk Assessment Guidance Pilot – Feedback

Africa &
Saudi Arabia
(Sasol, Sabic)

Europe
(BASF,
Evonik)

South America
(Braskem)

North America
(Dow,
ExxonMobil)

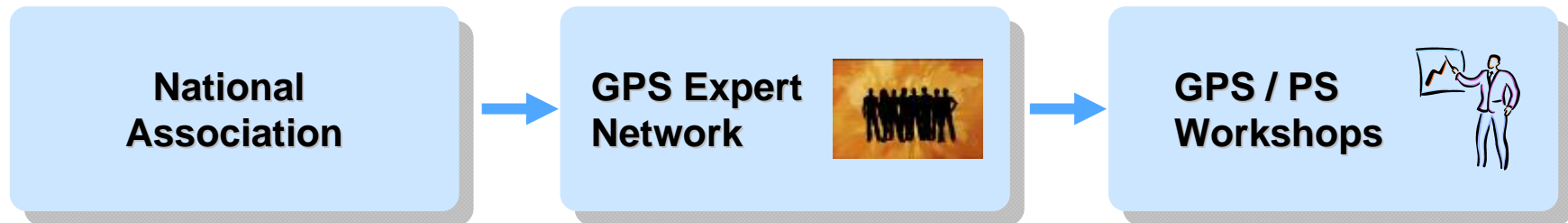
Asia Pacific
(Sumitomo,
Mitsubishi)

- The Guidance is a valuable tool and will help companies to meet their commitments to GPS as well as regulatory requirements but there is opportunity for improvement.

» Simplify language, add examples to illustrate processes and harmonized the guidance with the GHS classification

- The document has been revised by a professional communicator.
- It will be used in future capacity building workshops.

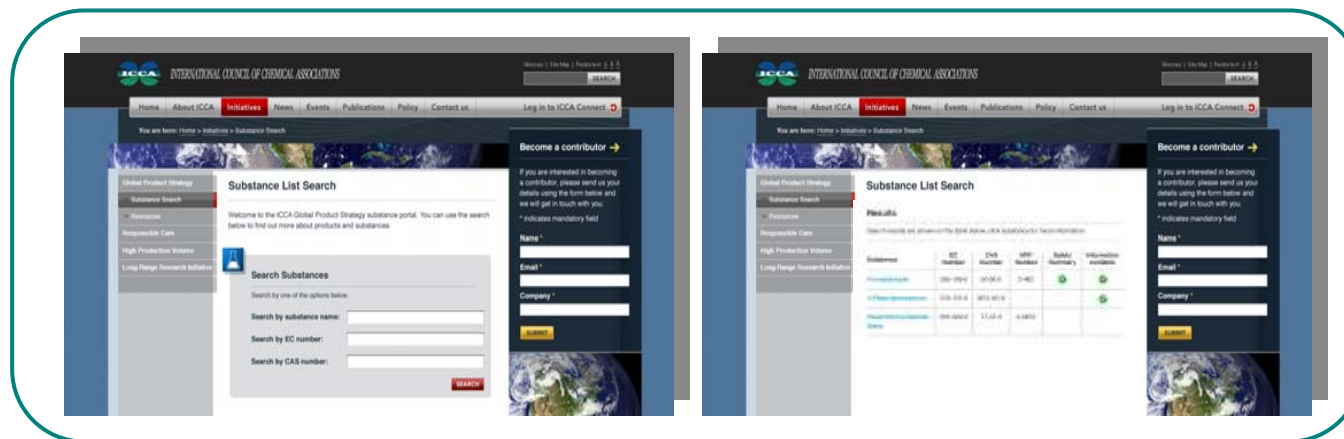
GPS Expert Network – Follow up of the GPS pilot



- **GPS Expert Network:** Experts from multinational companies serve as virtual source of advice for smaller companies / associations
- They answer technical questions via **PS Expert Newsgroup** the respective national associations were not able to solve directly
- Prepare Q&A for “ICCA GPS Guidance on Risk Assessment”
- Staff CB workshops and in-depth training courses

Status of the GPS IT Portal (Phase 1)

- Open access web portal hosting the GPS Substance Inventory (e.g. GPS Safety Summaries) which provides secure log - in / and upload for ICCA
- Landmarks / Amaze were selected as provider, this is an addendum to the ICCA website contract so no license fees will apply
- We expect a “soft-launch” of the portal in early October.
- Company websites will be linked to the portal



ICCA Capacity Building Workshops





GPS/PS Workshops in Latin America

- **2008:**
 - Colombia: October (Rita Carvalho)
 - Argentina: September (Erika Tada)
- **2009:**
 - Argentina: September (Rita Carvalho & Maricel Levaggi)
 - Chile: October 2009 (Rita Carvalho)
- **2010:**
 - Planned in Brazil: (Dow Speaker – TBD)



Capacity Building Workshops – Sample Agenda

- Introductions and Purpose
- Overview of Global Product Strategy and Implementation Plan
- ICCA Product Stewardship Guideline
- Business Value of Product Stewardship
- Product Stewardship in Action
- Assessing and Managing Chemical Risks
 - Overview of Hazard, Exposure and Risk Assessment
 - Case Study I
 - Case Study II
- Summary and Wrap-up



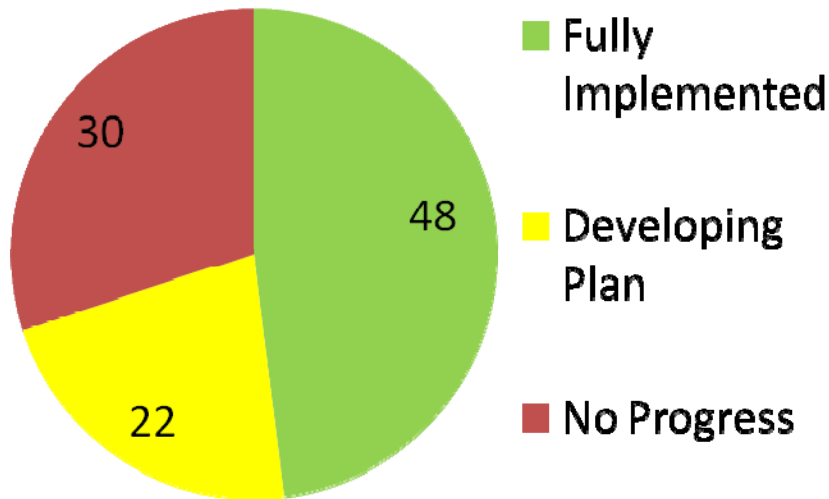
Implementation Progress and Challenges

- 2009 Baseline Reporting from 53 Associations
- Challenges
 - » Not all CEO's Have Communicated Their Commitment to GPS
 - » GPS May be Confusing to Some Companies
 - » GPS is a Voluntary Initiative vs. Mandatory Regulatory Requirements
 - » Companies and Associations Lack Sufficient Resources to Implement
 - » Small and Medium Sized Companies Lack Expertise and Experience

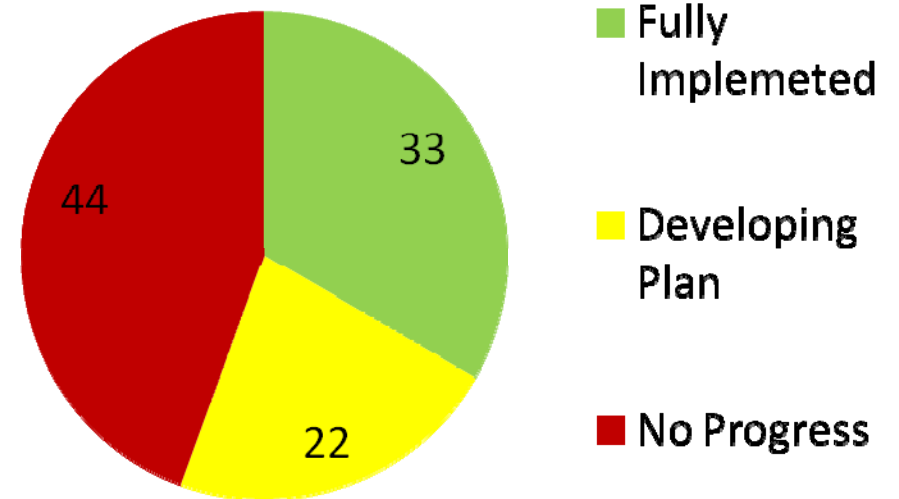


GPS Awareness

Rest of World



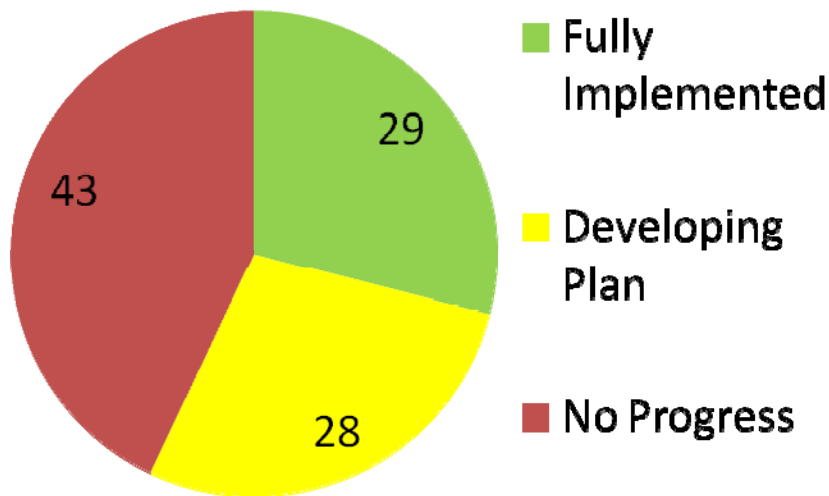
Latin America



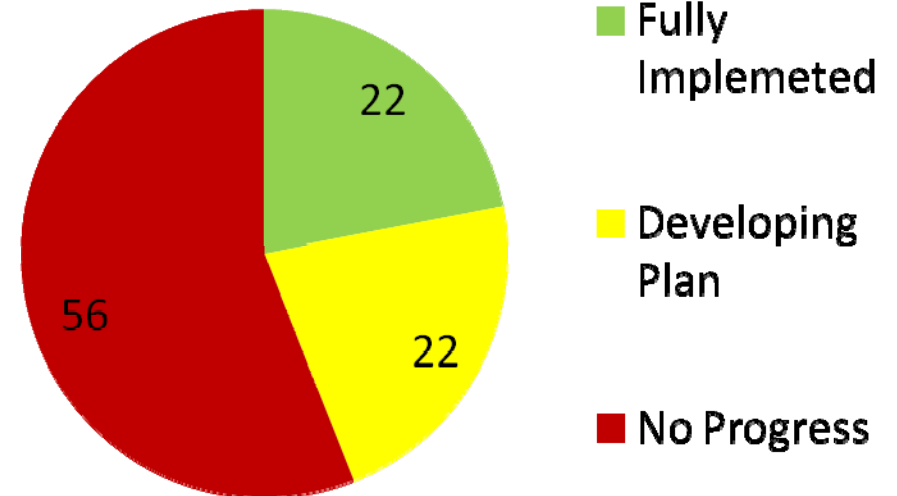


GPS Product Stewardship Guidelines Incorporated into National Program

Rest of World



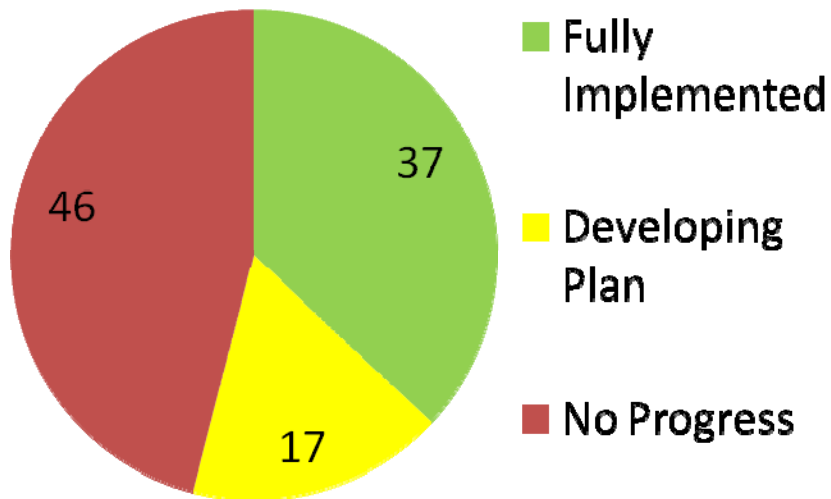
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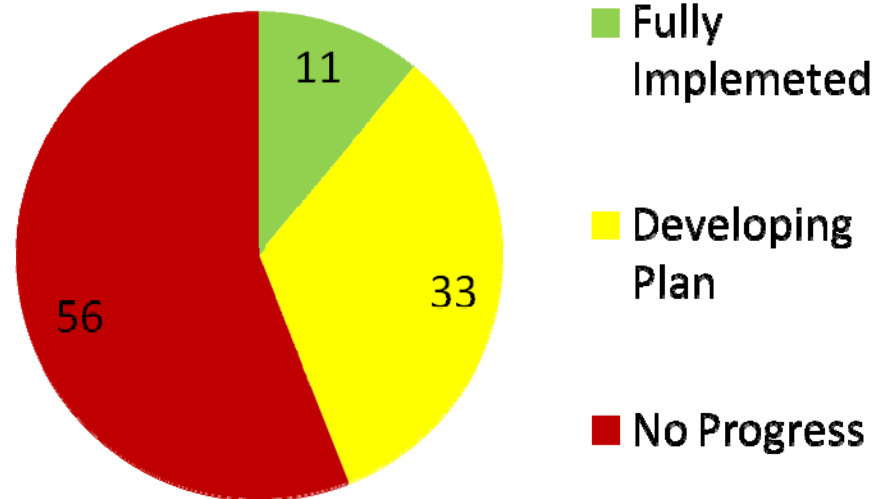


High Priority Chemicals Identified

Rest of World



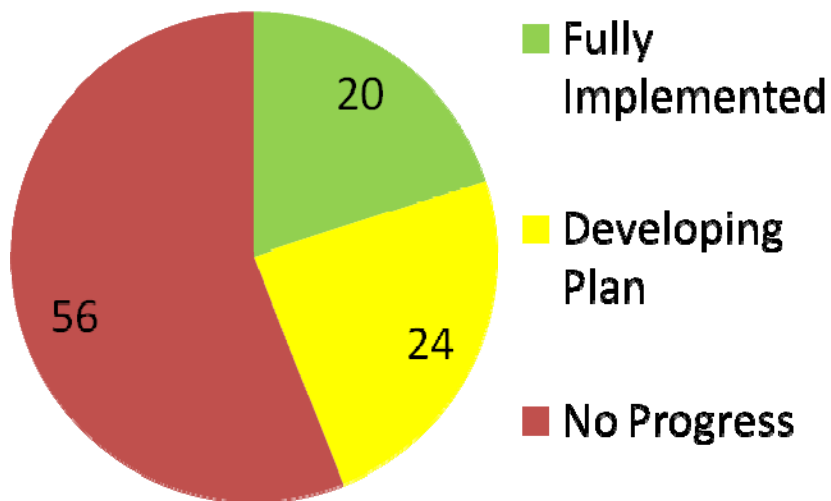
Latin America



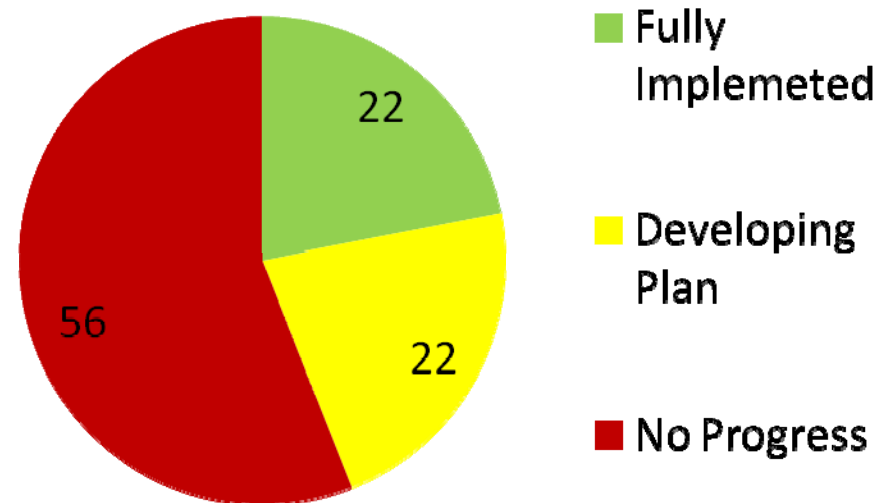


Organization Provides Public Access to Chemical Information

Rest of World



Latin America



- Fully Implemented
- Developing Plan
- No Progress



GPS Communication Package

- To assist local associations with GPS implementation:
 - » Rollout plan for GPS risk assessment guidance
 - » Template for GPS implementation plan for associations
 - » Script to be used for advocacy with local governments
 - » Feedback mechanism for associations (e.g. other needs, etc.)
 - » Generic template for GPS press release
 - » Letter for outreach to the value chain
 - » Update ICCA website e.g. for CSD messaging



UNEP (SAICM) Partnership

- Sylvie Lemmet, Director of the UNEP Department of Technology, Industry, and Economics was nominated as focal point
- Potential areas for cooperation (supported by the ICCA Board)
 - » Capacity Building (developing regions and SMEs)
 - » Value Chain Outreach and Chemical Safety Training
 - » Harmonization of systems on chemicals management
 - » Stakeholder dialog (e.g. health, lead in paint)
 - » Legacy of the past
- UNEP and ICCA are developing a Memorandum of Understanding (MOU) to formalize the partnership (signature expected mid 2010)



UNEP (SAICM) Partnership – Specific projects

Lead in Paint

- » UNEP and WHO are in process of establishing the global partnership to promote phasing out of the use of lead in paint
- » ICCA is supportive of a phase-out and will participate in the dialog

Retiree Pilot Project

- » Multistakeholder Steering Committee to oversee policy, procedures and project selection (start April 2010)
- » UNEP highly appreciated the financial contribution by ICCA (30 K). Similar funding is expected from the EU, US and Switzerland
- » ICCA recruits retirees to be deployed as “experts on mission”

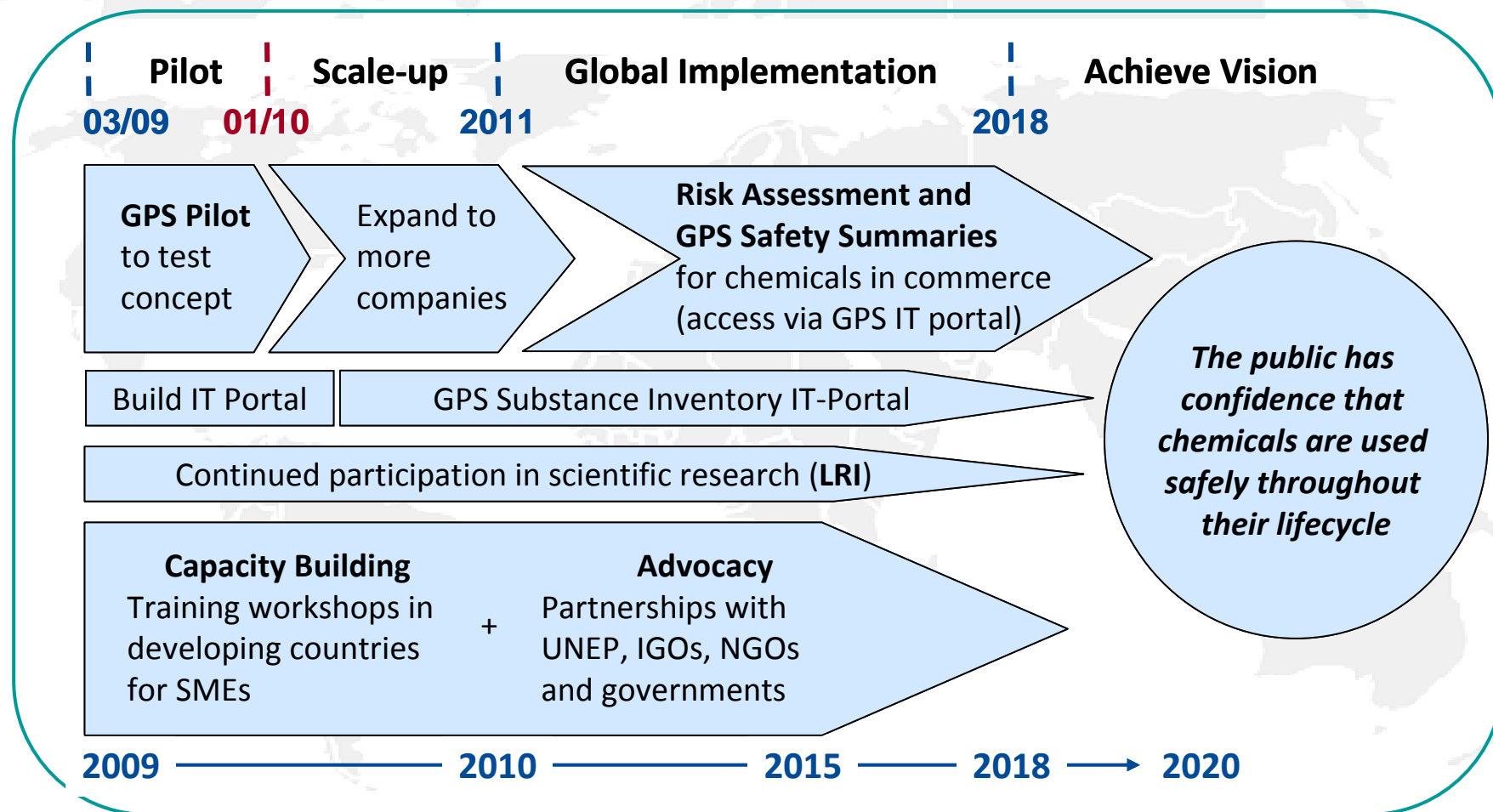


NGO Engagement Process – Status update

- » Collected a list of existing industry / NGO partnerships to be integrated within the context of SAICM
 - » Identified two new areas for collaboration and potential NGO partners: Capacity building and Safe Supply Chain activities
- World Wildlife Fund (WWF), International Trade Union Confederation (ITUC), International POPs Elimination Network (IPEN) and Center for International Environmental Law (CIEL)
 - WWF and ITUC indicated interest to pursue dialogue and indicated interest to collaborate on future ICCA CB workshops e.g. join Mumbai workshop. The dialogue will continue in 2010.



GPS Implementation till 2020





Thank You!





Backup





Scope of GPS risk assessment

GPS activities are focused on chemicals in commerce

- » Exceeding a threshold of 1 t/y per company **or**
- » Having a highly toxic / eco-toxic profile generating a major threat to employees or the public even in very small amounts



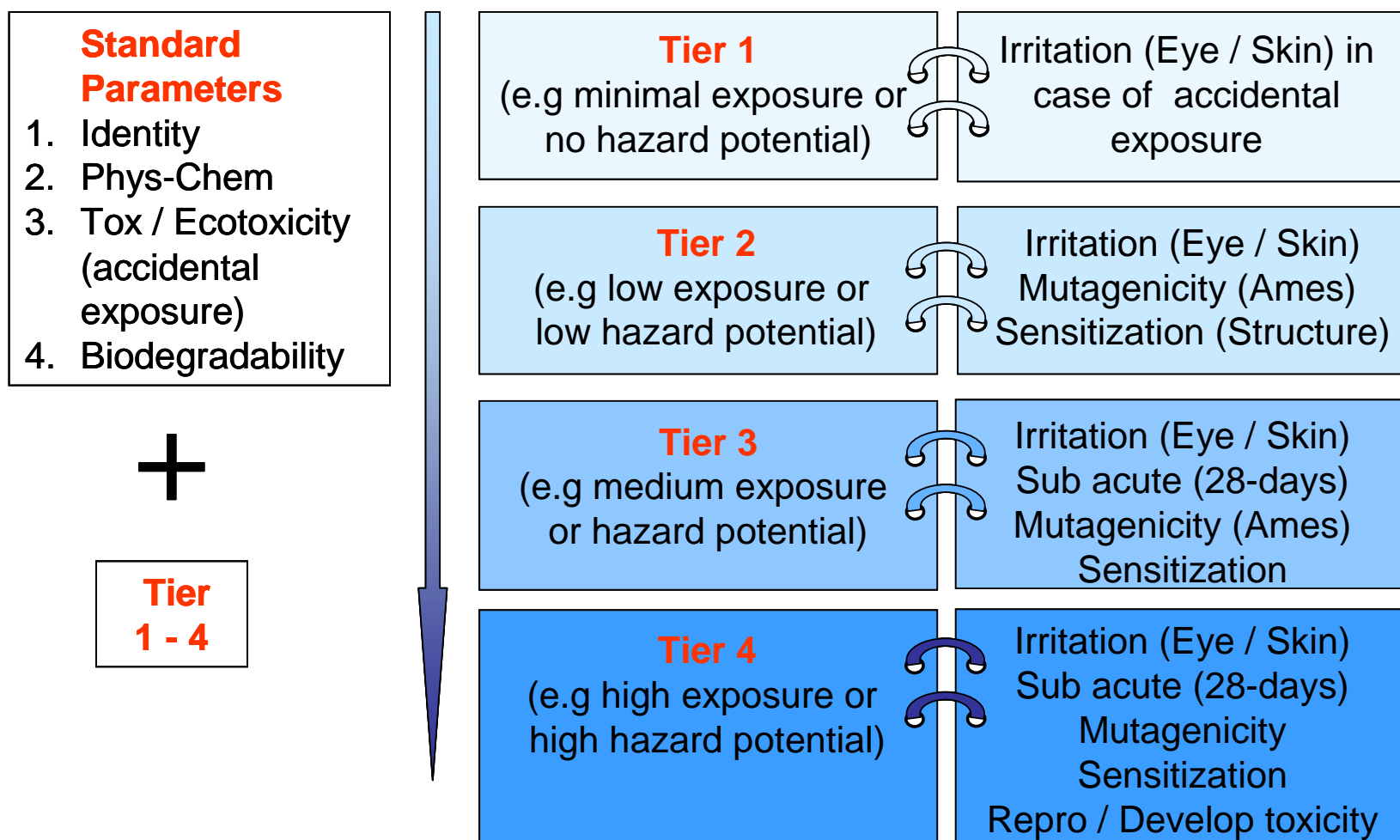
**Risk characterization and risk management measures for
chemicals in commerce by 2018**



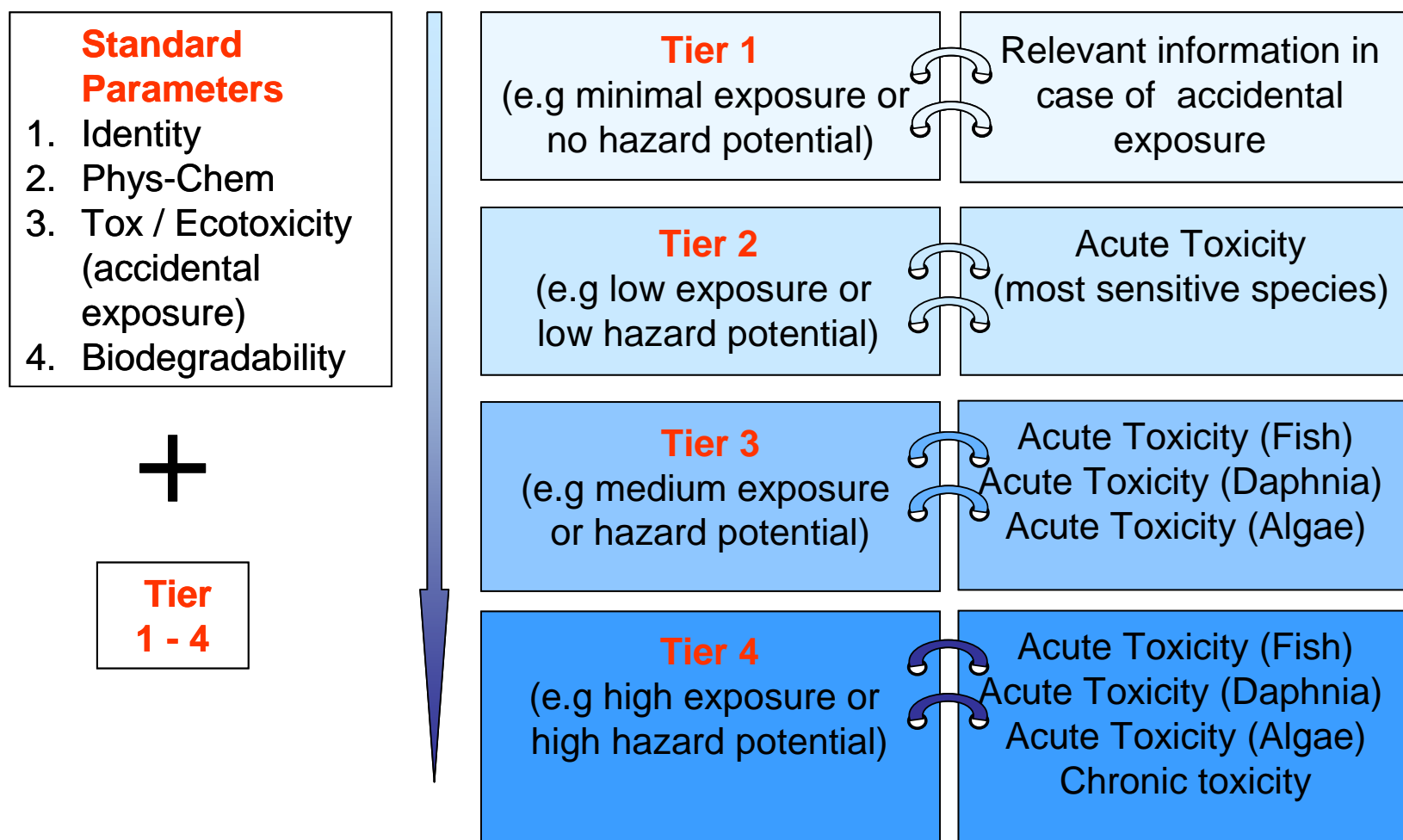
Improve performance – Risk Assessment Guidance

- The target audience are developing regions and small and medium sized companies with no or very limited experience in risk assessment and related methodologies
- Our goal was to come up with an easy to use step wise process leading to an understandable assessment. It's not supposed to be equivalent to REACH standard but equals a first step to bridge the gap.
- Based on the comments from the pilot we've decreased the level of details from the first version and instead referenced other sources of in depth expertise to keep it simple and straightforward.
- The guidance has its limitations, it will be a living document to be updated / improved in the years to come based on the feedback we will receive of the companies using it.

Mammalian toxicological data requirements



Environment toxicological data requirements





Chemical Policy & Health (CP&H) – Organization

