DISCUSSION 2

Best Practices for Responsible Chemical and Waste Management in Companies and SMEs

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Chemicals and Waste Management
Community of Practice (CoP)

saicm Green Forum GREEN GROWTH Knowledge Partnership

Presenters

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What is the Sound Management of Chemicals (SMOC) and Chemical Waste?

- Aims to **prevent**, and where not feasible, to minimize the **potential for exposure of humans and the environment to toxic and hazardous chemicals**
- Includes **prevention, reduction, remediation, minimization and elimination of risks from chemicals during their life cycle.** This covers:
  - Chemical intermediaries and final products, as well as chemicals found in other products or articles
  - All life cycle stages: product design, raw material extraction, production of intermediate and final products, storage, transport, marketing and retail, use and disposal
- Incorporates **Green Chemistry**
- Applies **best managerial practices to chemicals** (techniques and technologies) at each stage of the life cycle
- Enables **sustainable consumption and production** (SCP)

Chemicals management is crucial for small and medium enterprises to:

- Ensure regulatory compliance
- Maintain a positive reputation
- Protect employee health and safety
- Achieve cost savings
- Minimize environmental impact
- Ensure business continuity

Examples of Sound Chemicals Management over the Product Life Cycle

Raw material extraction and processing

- Using chemicals with low environmental and social impacts during extraction operations (e.g. minimizing water and energy consumption, hazardous waste and unfair or unsafe working conditions)
- Extracting non-depleting renewable materials

Production of intermediate and final products

- Using safer chemicals, recycled feedstock
- Recycling and recovery of solvents
- Upgrading hazardous by-products to safer saleable products
- Using business models to improve safety and resource efficiency in the value chain

Transportation and distribution

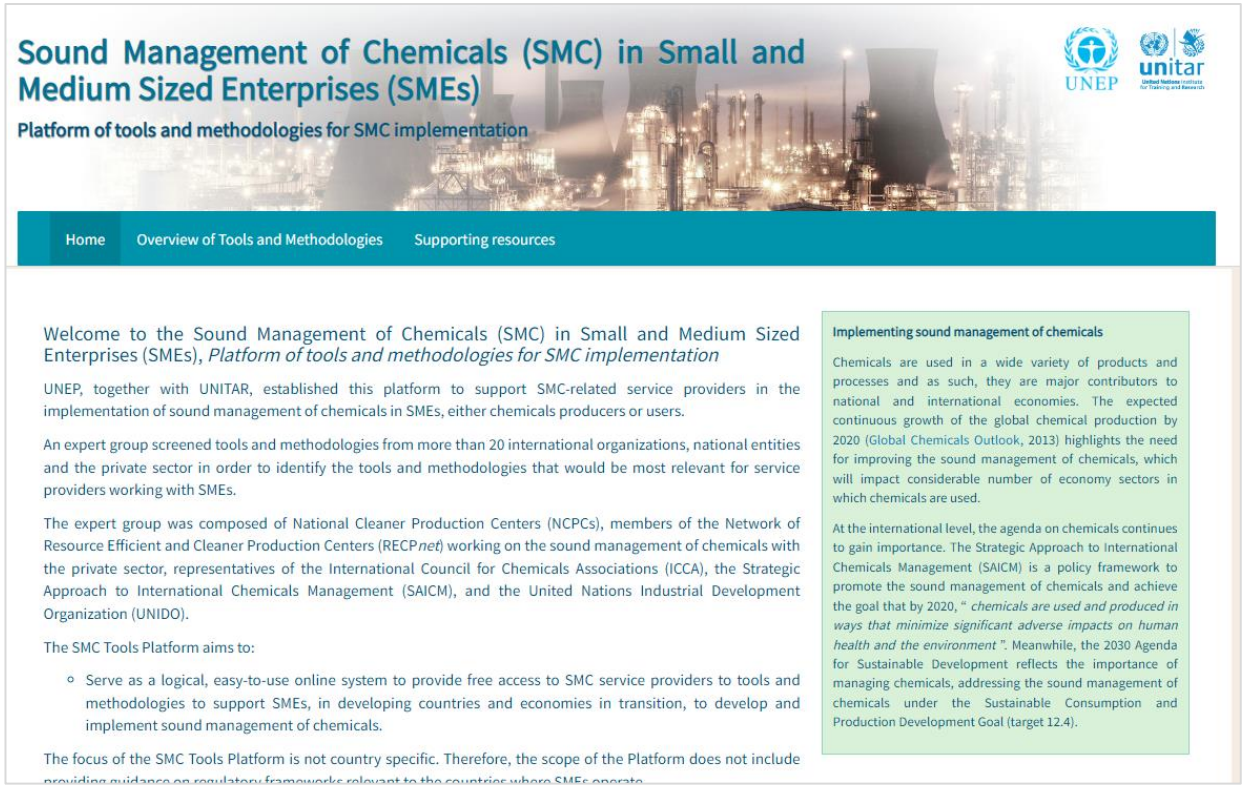
- Using certified and trusted transporters for dangerous goods, ensuring proper containers and labelling

Use (industrial or consumer)

- Longer product lifetime, no toxic releases, low energy consumption, better quality of life
- Designing products to minimize their sustainability impact during use

End of Life (EoL)

- Designing chemicals and products for reuse, recycling or biodegradability depending on the EoL fate (e.g. landfilling, incineration, recycling)
- Eliminating toxic impacts on human health or the environment at the EoL stage



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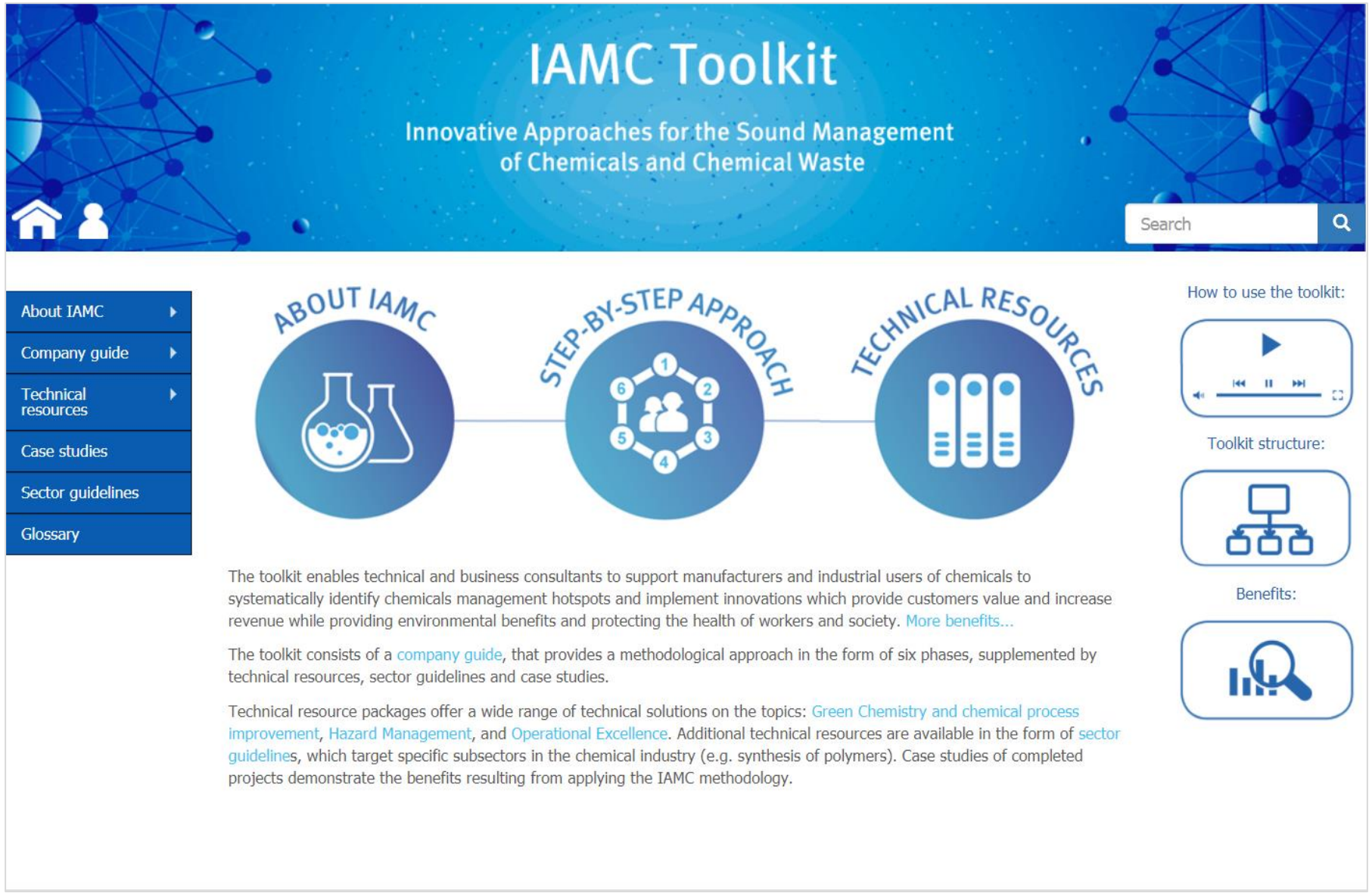

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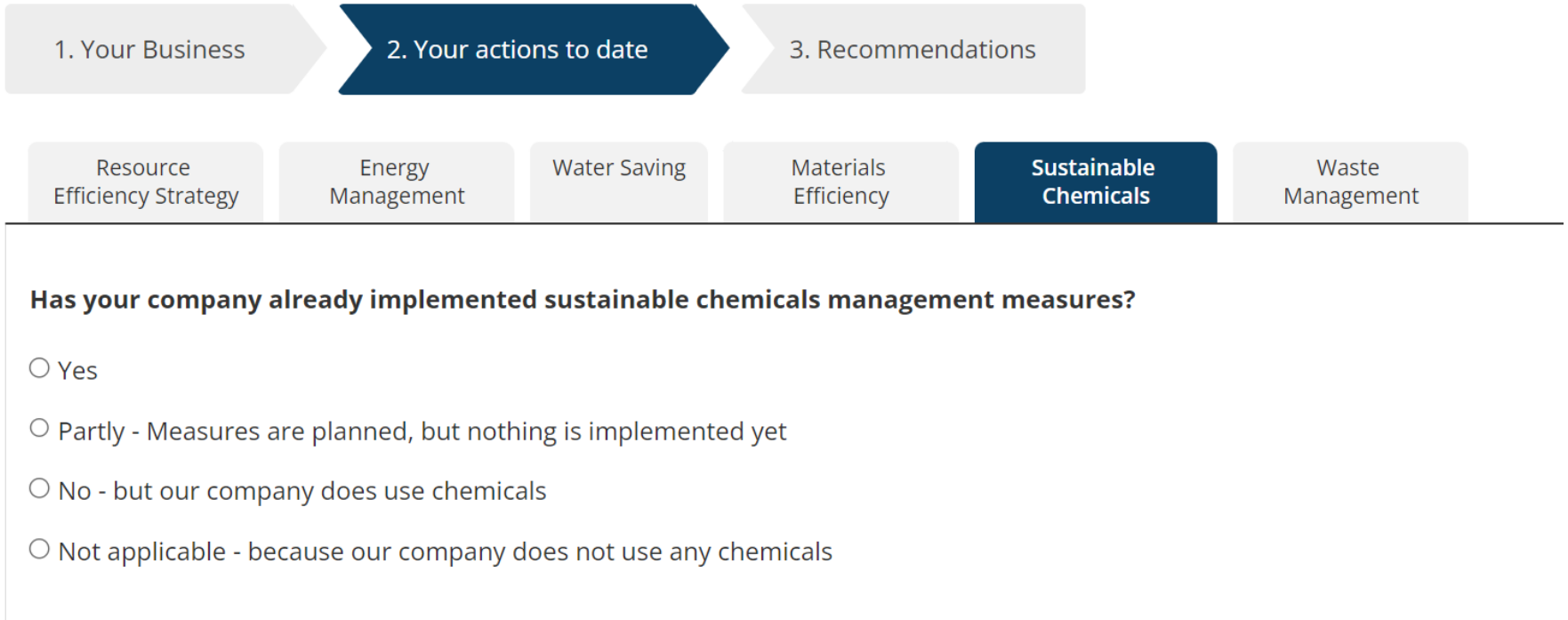

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Learn about the key steps we recommend your company takes to develop and implement an effective sustainable chemicals programme

The steps outlined below for developing a sustainable chemicals programme follow the same format as the steps described above for developing an overall resource efficiency strategy.

1. Develop a formal written commitment from top management to improve sustainable chemicals management that is shared with company staff and possibly also external stakeholders. Ideally this commitment should also detail what specific sustainable chemical management improvements are being prioritised, e.g. sourcing environmentally friendly chemicals, reducing quantities of chemicals in products or processes, etc.
2. A dedicated sustainable chemicals management team is appointed by top management.
3. Carry out an initial screening to assess the key factors that could influence either positively or negatively any sustainable chemicals actions, such as customer requirements, regulation (current and planned) and staff skill levels. Note that this screening is very similar to a risk assessment and is ideally carried out with the support of a qualified service provider.
4. Develop a sustainable chemicals strategy with clearly identified goals and performance indicators that cover the main chemical substances consumption being addressed and communicating it clearly to all company staff and possibly also to external stakeholders.
5. Carry out an in-depth chemical audit across all your company's business processes to identify the potential sustainable chemicals measures. With the audit results develop an action plan that sets out the priority measures based on cost, risk and benefits. Note that this is ideally carried out with the support of a qualified service provider.
6. Put in place a monitoring and review process that will enable your company to track the performance of implemented sustainable chemicals measures, as well as identify new opportunities more easily.

Discussion Question 1

- What methods or technologies have you found most effective in managing the risks associated with chemical and waste management?

- How have these helped you to improve the sustainability performance of your business?

International Council of Chemical Associations

Responsible Care®

International Council of Chemical Associations (ICCA)
Responsible Care Leadership Group (RCLG)

Cherie Weible

What is Responsible Care?

- **Responsible Care** is the global chemical industry's voluntary initiative to drive continuous improvement in safe chemicals management and achieve excellence in environmental, health, safety and security performance.

- **Responsible Care** is a global initiative, and national chemical associations work with member companies to implement the program in their respective regions.

Responsible Care®

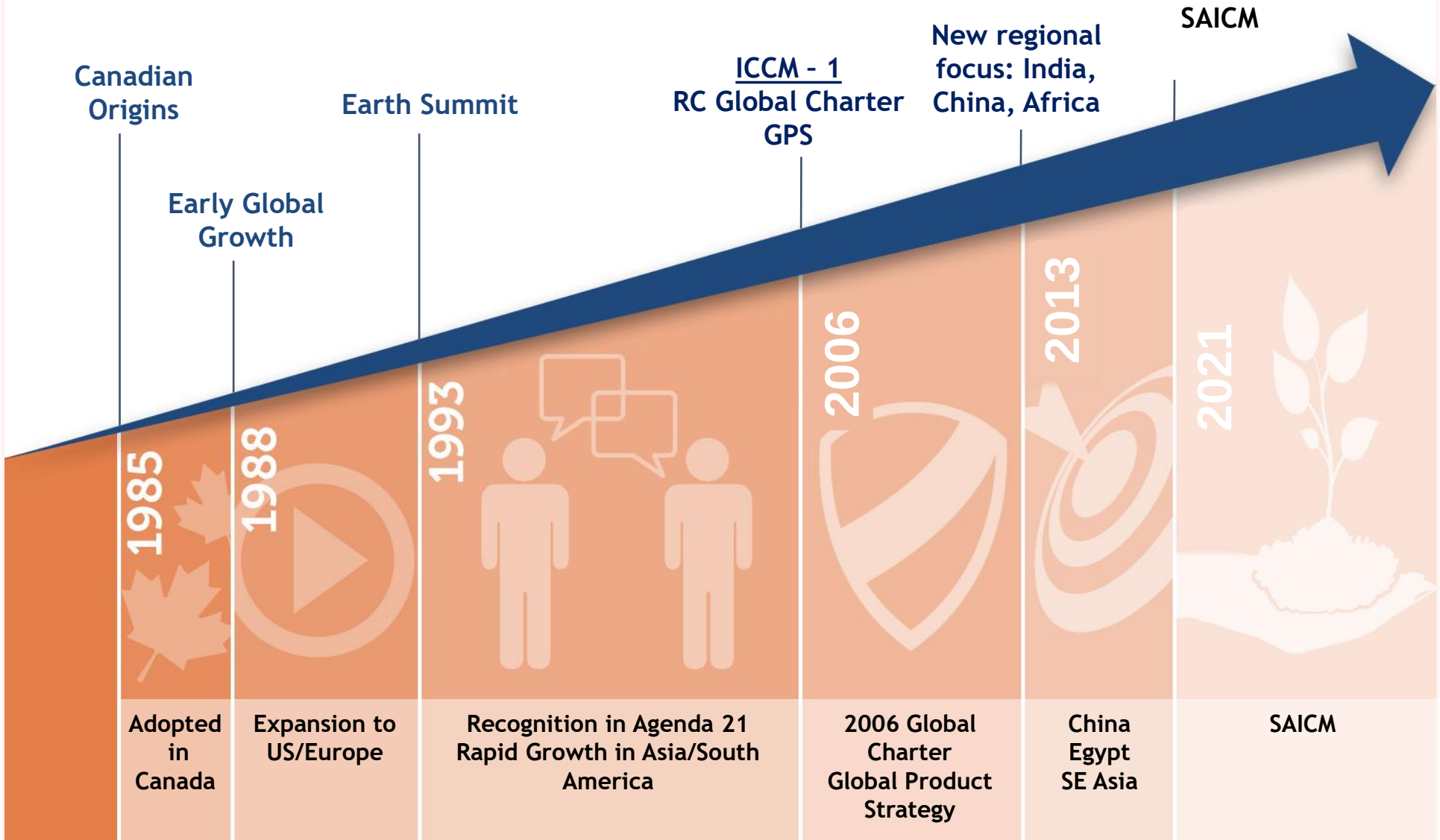
Our commitment to:

- Improve EHS&S performance and chemical management
- Use resources efficiently
- Build stakeholder relationships
- Report openly and transparently
- Improve efficiencies, lower operating costs
- Share ethical and operational philosophies, linking suppliers and customers
- Provide a performance foundation for ICCA advocacy

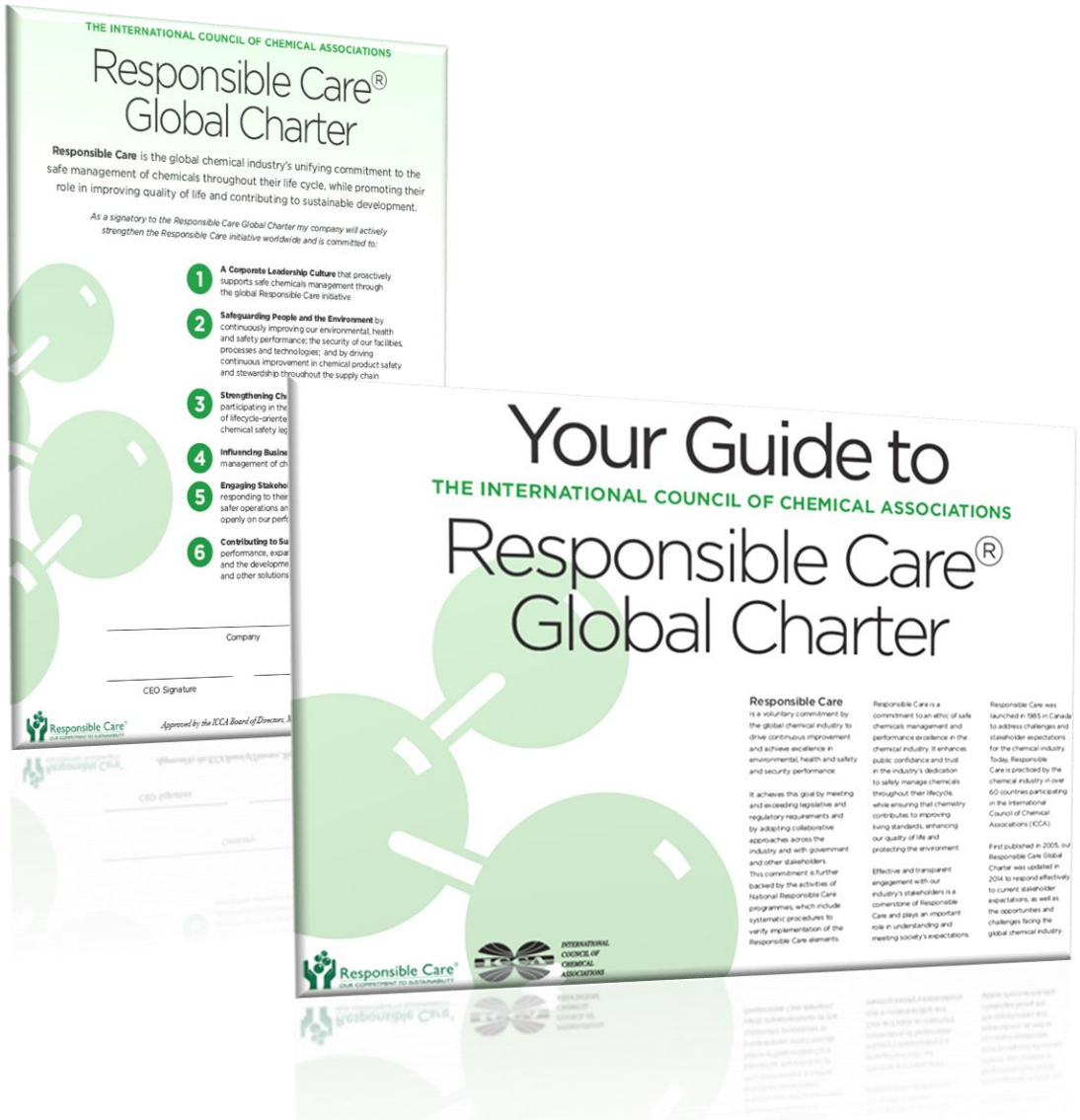
Origins of Responsible Care®

- Series of chemical incidents in 1970s-1980s.
- December 1984: Bhopal, India tragedy – 2,000 people are killed and thousands more injured by toxic chemical vented from Union Carbide plant.
- Canada Chemical Producers Association (CCPA) convenes special board meeting immediately after Bhopal.

Responsible Care Growth and Evolution



Responsible Care Global Charter



The Global Charter sets out broad commitments for Responsible Care companies. CEO's sign and pledge to implement the program.

Addresses:

1. Corporate Leadership Culture
2. Safeguarding People and the Environment
3. Strengthening Chemicals Management Systems
4. Influencing Business Partners
5. Engaging Stakeholders
6. Contributing to Sustainability

Global Charter Elements

- The Global Charter sets out broad commitments for Responsible Care® companies.

- CEOs sign and pledge to implement the Global Charter and uphold its six core elements:
  1) **Corporate Leadership Culture**
  2) **Safeguarding People and the Environment**
  3) **Strengthening Chemicals Management Systems**
  4) **Influencing Business Partners**
  5) **Engaging Stakeholders**
  6) **Contributing to Sustainability**

Global Charter for National Associations

- Approved in 2019 by the ICCA Board of Directors
- Clarifies role of national associations to guide member companies in Responsible Care implementation
- Document is similar to 2014 Global Charter for companies and includes a set of eight Fundamental Features specific to associations.

Responsible Care Fundamental Features

1. Guiding Principles developed and adopted
2. Logo is registered and protected
3. Establish a set of systems, codes, policies covering environmental protection; employee, process and distribution safety; product stewardship; community awareness and emergency response
4. Association tracks and reports performance (Key Performance Indicators) of its members
5. Stakeholder outreach and communication
6. Best practice sharing among its companies
7. Encourage participation
8. Procedures to verify implementation

Responsible Care Implementation Milestones

- ICCA established milestones for national associations to track progress against the Fundamental Features

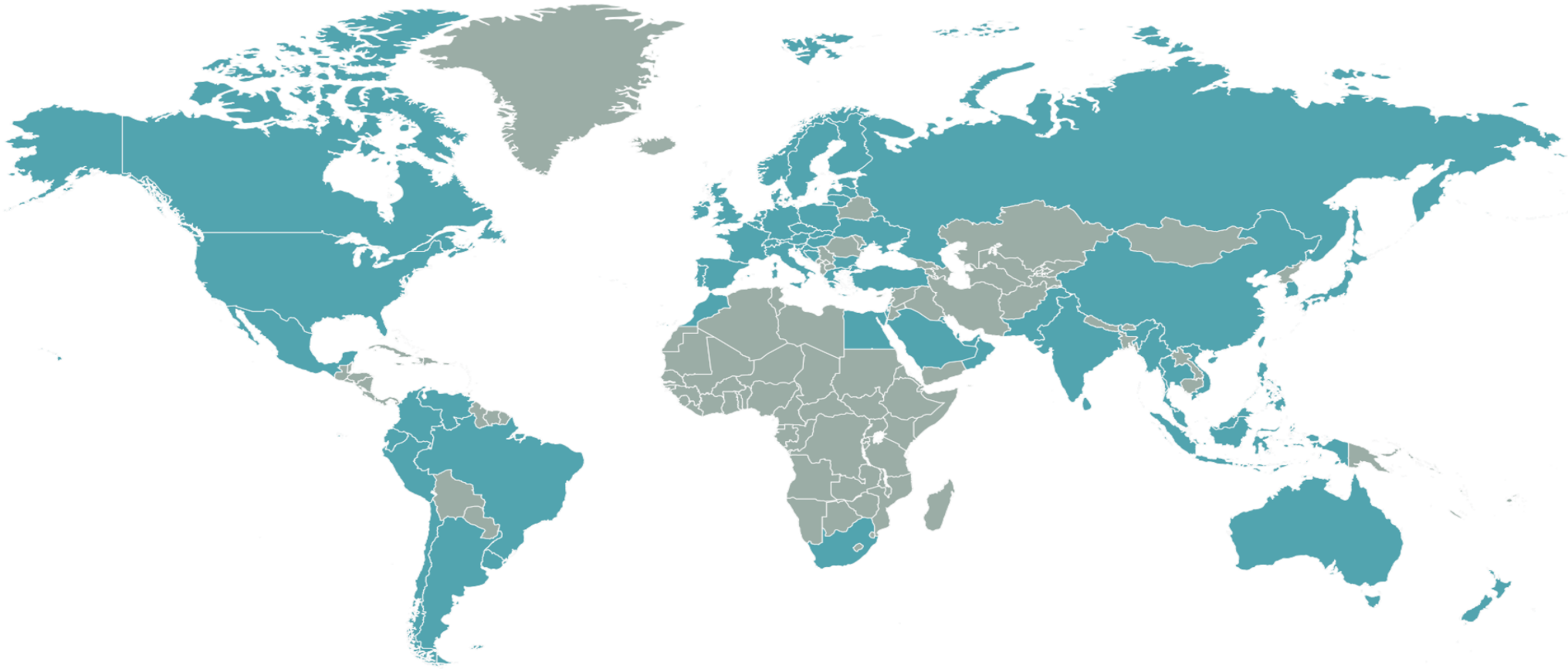
- Provides criteria associated with each stage of implementation of the Fundamental Features and general guidance

- Provides criteria to assist national associations in their effort to reliably and consistently assess the stage of their implementation of each feature.

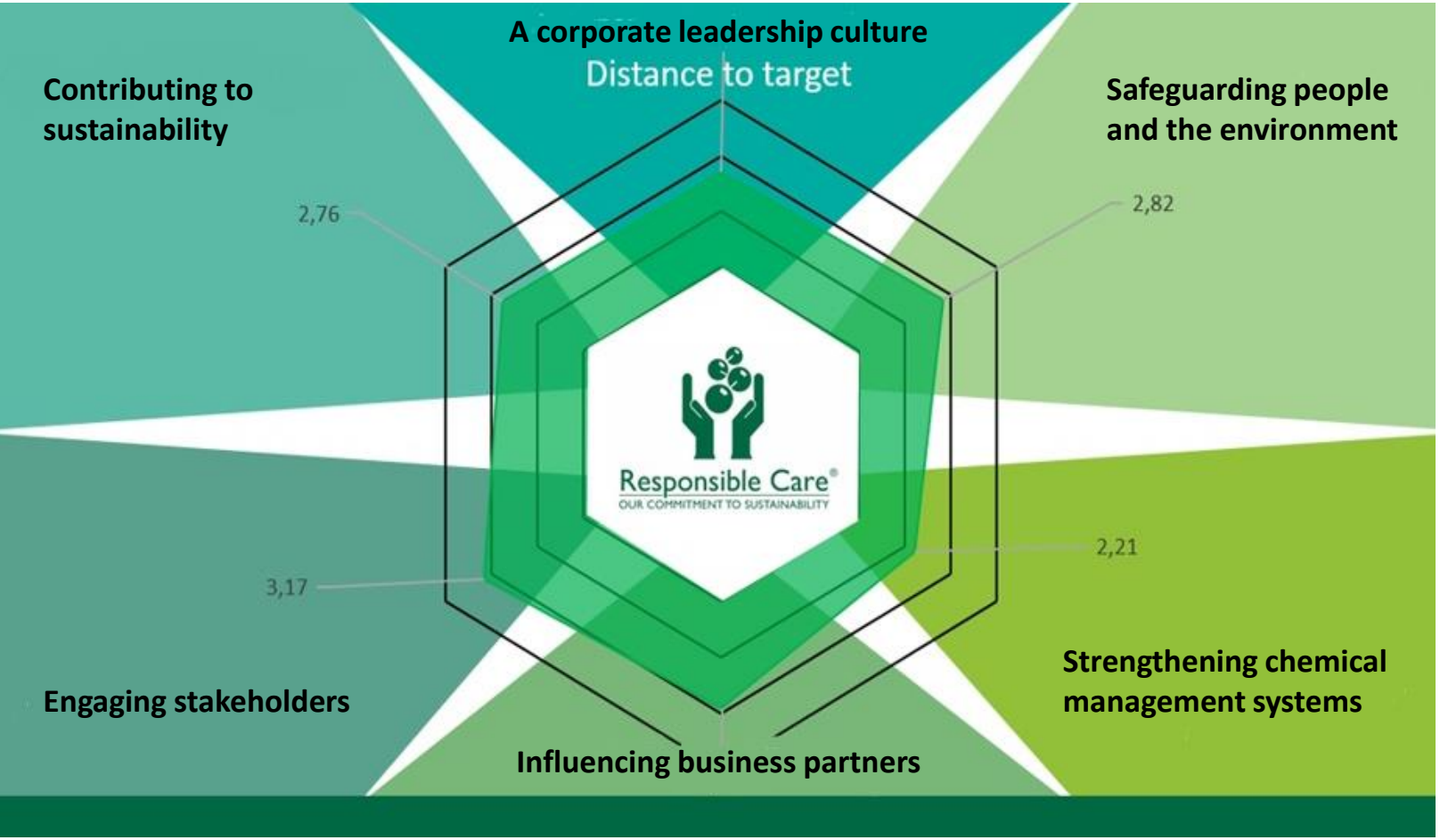
- Translated into:
  - **Chinese, Croatian, European Spanish, Latin American Spanish, Thai**

Responsible Care® Today

National chemical associations are implementing Responsible Care in nearly 70 economies around the world.



Responsible Care Self-Assessment Tool



A questionnaire with 101 multiple choice questions guide companies in their journey toward operational excellence:

- 6 chapters based on the 6 elements of the Responsible Care Global Charter.
- Implementation tips provided.
- Answers linked with international and market standards and UN SDGs.
- Developing IT platform to deploy the tool globally in 2024.

ICCA Commitment to UN SDGs

Chemistry plays an integral role in addressing global sustainability challenges:

- **Climate change:**
  Industry efforts to reduce CO2 and other GHG emissions
- **Abundant access to food:**
  Crop protection, fertilizers, enhanced storage capabilities
- **Clean water and sanitation:**
  Purifying water, supplying water delivery systems, developing water-saving initiatives

Discussion Question 2

- **What are some potential areas of Responsible Care that you believe could be compelling and relevant to your organization's operations and goals?**

- **How do you envision the potential of the Responsible Care Self-Assessment tool to improve your organization's chemical management practices, overall sustainability performance, stakeholder engagement, and regulatory compliance?**

Discussion Question 3

- How have changes in regulations and market demand influenced your chemicals and waste management practices?

- How have you adapted your business strategies in response to these changes?

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Chemicals and Waste Management Community of Practice

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