GIZ PRACTICAL CHEMICAL MANAGEMENT

TOOLKIT FOR YOUR COMPANY

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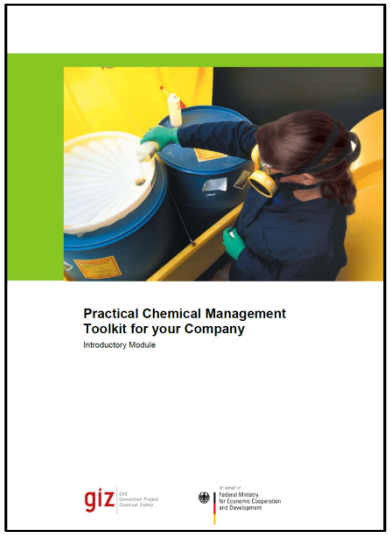
Overview

- Aim of our toolkit
- Our approach
- Focus on a preventive Chemical Management approach
- Risk assessment based on CB
- Topics to discuss

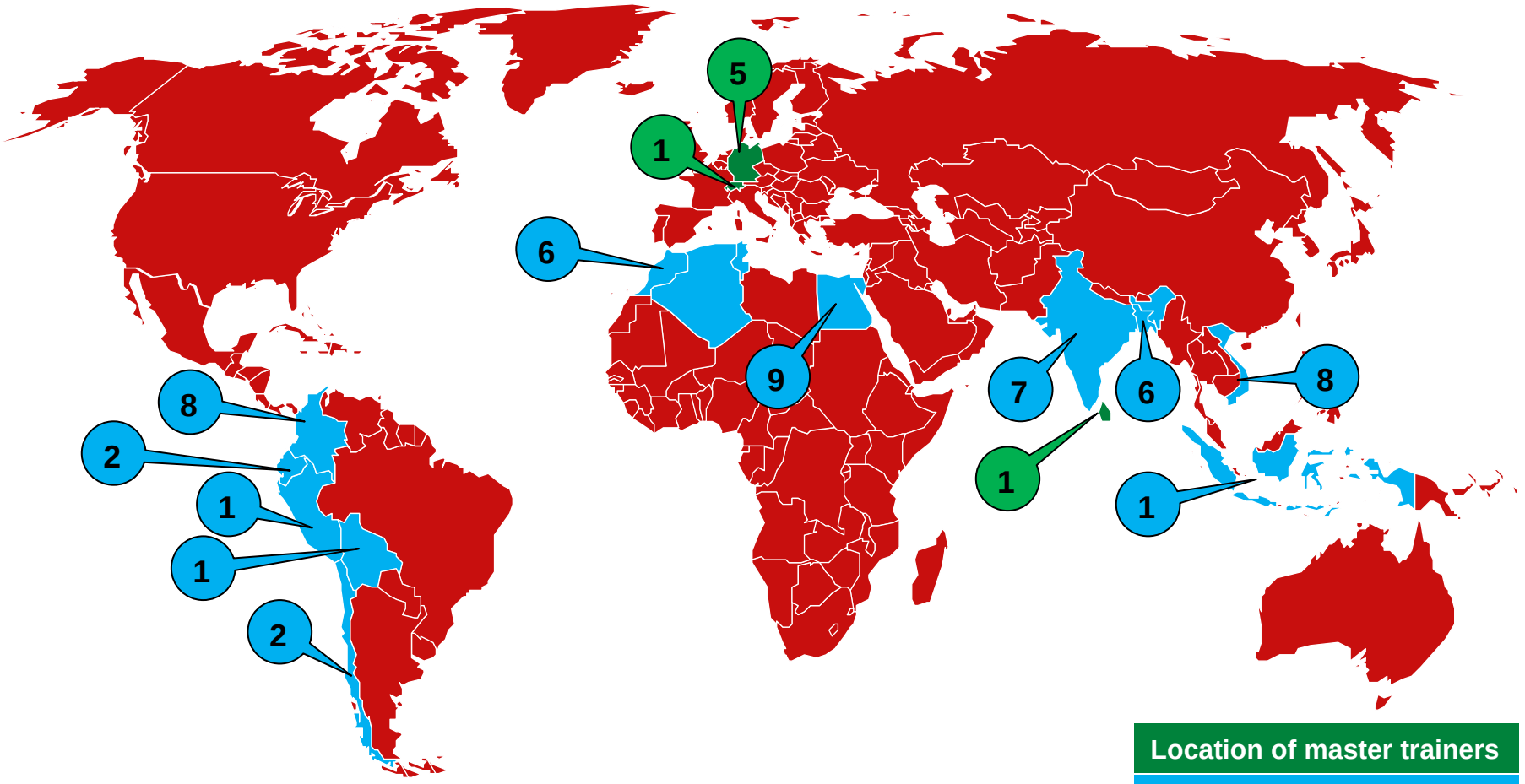
Aim of GIZ Practical Chemical Management toolkit

Our aim is to provide support in addressing challenges with regard to…

1. Ensuring / improving efficient use of chemicals
2. Managing the risks to the environment, health and safety
3. Considering reduction of production costs
4. Integrating new concepts like Non product output (NPOs), Control banding and Work Safety into existing management structures, particularly of SME
5. Helping companies to meet social and environmental standards
6. Facilitating the ISO certification process for companies



GIZ CM **master trainers** and **trainer pools**



GIZ toolkit contains two innovatives elements

Simplified method of Risk Communication based on CB

The entire educational train-the-trainer process makes GIZ also innovator at utilizing CB as an integral education technique

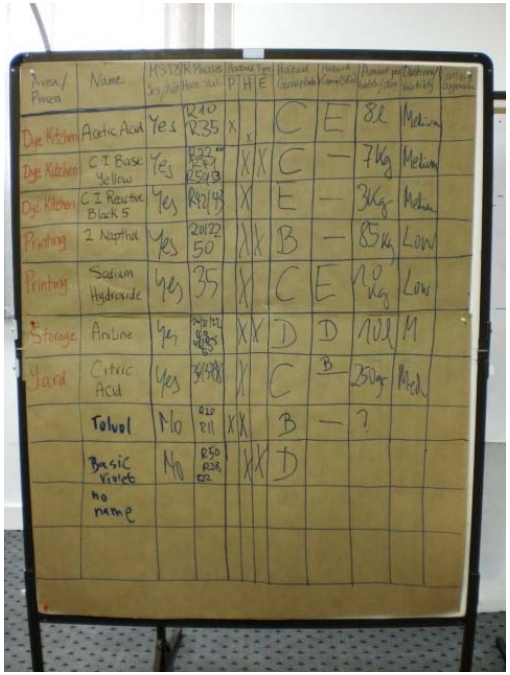
Our approach supporting your company

- **The Extra Something:**
  - no teacher-centered teaching
  - follows an approach well known from vocational education
  - **The trainers are facilitators and help you and your staff by just asking supportive or provocative questions, for you to find your own solutions for your problems**
  - Problems identified in the class room can be verified right away in the plant

- **The training set-up**
  - Includes company on-site application
  - Every-day work environment integrated into our training
  - Participants are away from work no longer than necessary

Your company will...

- Compile a chemical inventory of all chemicals used in your company
- Identify and assess hazards and risks of chemicals in use in your company



Risk assessment and risk management involves…

1) Formation of a “Chemical Management team”

2) Creating an inventory of all hazardous input materials and collecting relevant information from SDS
   - Health hazards
   - Physical hazards
   - Environmental hazards

3) Carrying out risk assessments
   (linking hazard information to hazard groups, amounts used and dustiness / volatility)

4) Identifying adequate control measures

5) Conducting a walk-through survey

6) Evaluating the present control measures and taking the necessary action

At the end your company will have managed to…

compile a risk assessment table for the most important chemicals

Area/ Process	Name	MSDS Yes/no	R-phrases/ Hazard statements	Hazard type			Hazard group	Hazard group skin	Amount per batch/task	Dustiness/ volatility	Control approach	
				P	H	E					Inhale	Skin
Dyekitchen	Acetic Acid	Yes	R 10, R35				C	E	8 l Medium	Liquid Medium	3	High
Dyekitchen	C.I Basic Yellow	Yes	R22, R41, R50/53				C	-	7 kg Medium	Liquid Medium	3	-
Dyekitchen	C.I Reactive Black 5	Yes	R42/43				E	-	3kg Medium	Solid Medium	4	-
Pretreatment	2-Naphthol	Yes	R20/22 R50				B	-	85 kg Medium	Solid Low	1	-
Pretreatment	Sodium Hydroxide	Yes	R35				C	E	10 kg Medium	Solid Low	2	High

Output:

Action plan to complete inventory and risk assessment and to anchor it in the company.

Identifying recommended control approaches for different levels of hazards and risks

Amount used	Low dustiness or low volatility	Medium volatility	Medium dustiness	High dustiness or high volatility
Hazard Group A				
grams or millilitres	1	1	1	1
kilograms or litres	1	1	1	2
tonnes or cubic metres	1	1	2	2
Hazard Group B				
grams or millilitres	1	1	1	1
kilograms or litres	1	2	2	2
tonnes or cubic metres	1	2	3	3
Hazard Group C				
grams or millilitres	1	2	1	2
kilograms or litres	2	3	3	3
tonnes or cubic metres	2	4	4	4
Hazard Group D				
grams or millilitres	2	3	2	3
kilograms or litres	3	4	4	4
tonnes or cubic metres	3	4	4	4
Hazard Group E				
	For all substances in hazard group E control approach 4 is required			

Control approaches for inhalation risks

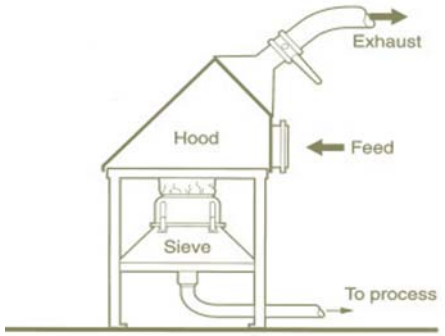
1) Good working practice
General ventilation

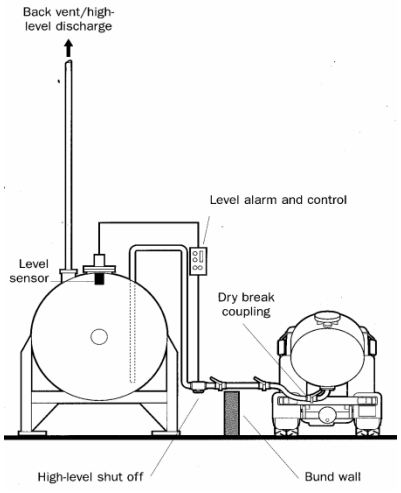
2) Engineering control
Local exhaust ventilator

3) Engineering control
Containment

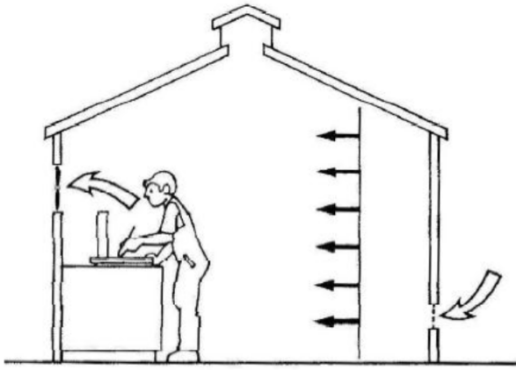
4) Special advice
(Substitution etc.)

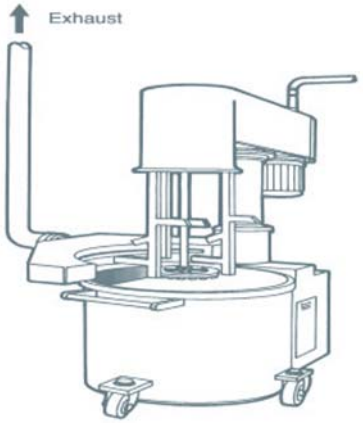
Later your company will…

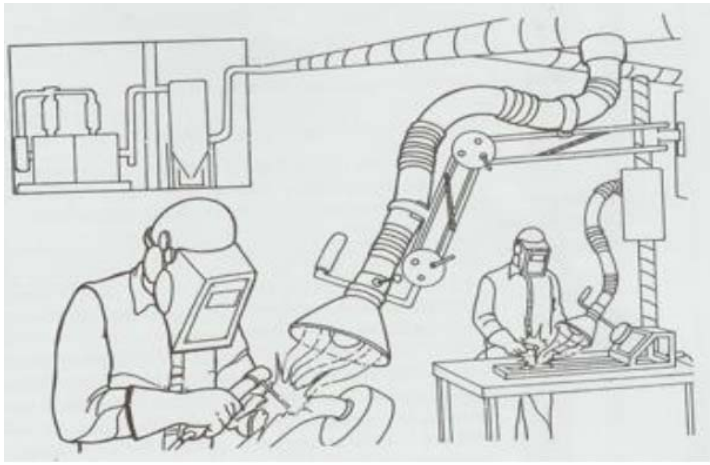




- <u>Identify</u> and <u>analyse</u> the gaps between existing and recommended control methods







CB specific topics to discuss

- For inhalation and skin hazards and risks a Control Banding methodology developed by COSHH and modified by BAuA in 2009 is well established and incorporated in our toolkit.
- For health risks to the eyes we do not have a CB approach.
- The CB approach for physical hazards and risks developed by BAuA in 2010 still need to be refined.
- A control banding approach for environmental risks (R50-R59) needs to be developed urgently.

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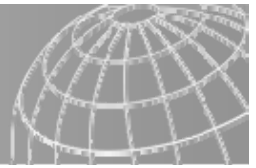
The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Established on 1 January 2011, GIZ brings together under one roof the long-standing expertise of **DED, GTZ** and **InWEnt**.

giz CHS Convention Project Chemical Safety



giz CHS Convention Project Chemical Safety

On behalf of
Federal Ministry
for Economic Cooperation
and Development