

Responsible Production Toolkit

June 2014

Ms. Johanna Suikkanen
Programme officer
Cleaner and Safer Production
UNEP-DTIE



Session Content

Module 6 Hazard Identification and Risk Assessment:

- Overview of Responsible Production
- Introduction to Hazard Identification and Risk Assessment
- Group Exercise on Hazard Identification and Risk Assessment
- ICCA Responsible Care Support Materials and Toolkits



Presentation Outline

- What is Responsible Production?
- How is it implemented?
- What tools exist to support (simplified) hazard identification and risk assessment?



UNEP Safer Production Portfolio

National
Level

- **Flexible Framework**

Community
Level

- **APELL**

Company
Level

- **Responsible
Production**



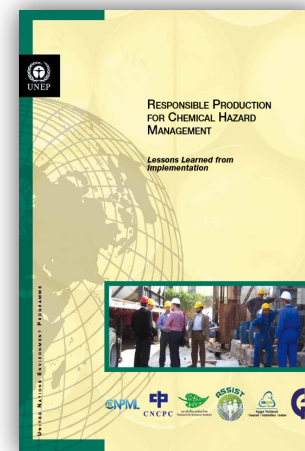
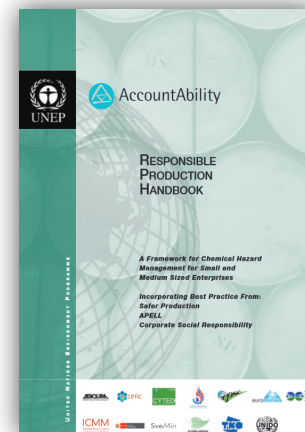
Responsible Production

- Overall goal to increase safety and reduce chemical emergencies, including environmental, social and economic impact
- Developed by UNEP and partners to improve chemical hazard management **in SMEs** and along the value chain
- Systematic, continuous improvement approach to chemical safety, addressing **onsite** hazards and promoting chemical safety with business partners, clients and local communities



Publications

- **RP Handbook** – A framework for Chemical Hazard Management for SMEs (2010)
 - Guidance, indicators and tools to systematically analyze and manage chemical risks in companies
- **RP for Chemical Hazard Management - Lessons Learned from Implementation** (2013)
 - Pilot case studies testing the applicability “on-the-ground” by UNEP, NCPCs and similar technical institutions
 - Feedback and recommendations for continuous improvement



Responsible Production Handbook

- **Framework Booklet**
 - Overall background, technical approach and business case for implementation
 - Indicators , case studies and lessons learned
- **Toolkit**
 - Core technical materials for operationalising the framework
 - Includes basic and advanced tools
- **Training Package**
 - Adaptable base for capacity building
 - 18 thematic training sessions to aid SMEs in implementation
 - Includes guidance for trainers and adaptable presentations
- **Learners and Trainers Companion**
 - Software based package to support capacity building
- **Web portal:** www.unep.org/responsibleproduction



Responsible Production

Technical institutions and other providers of technical support services to SMEs

SMEs Managers /safety officers responsible for chemical management and safety

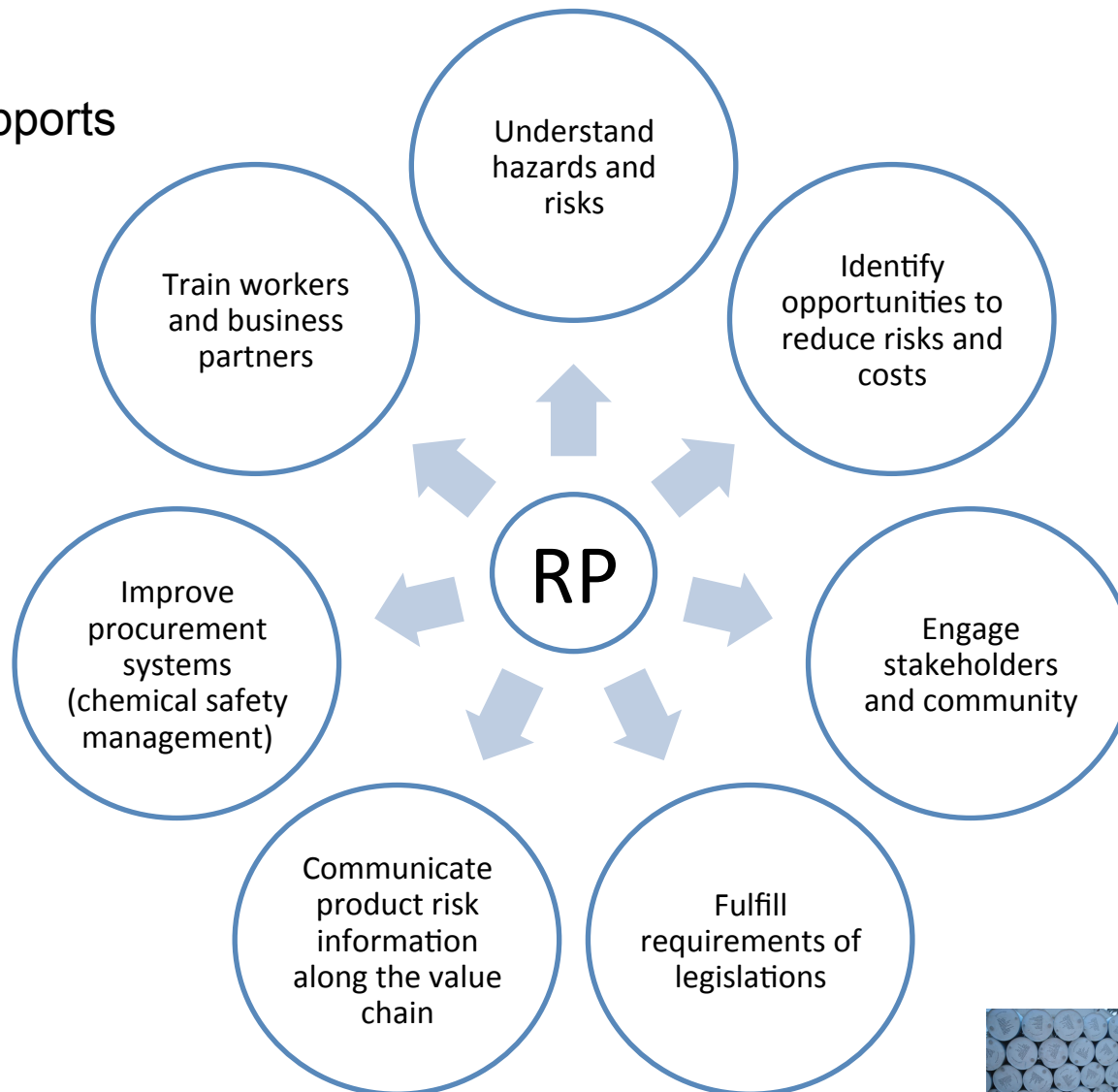
Local authorities and **government officials** who have an interest to ensure and enforce responsible chemical hazard management

Large companies that do business with SMEs and need assurance that smaller organizations are managing chemical hazards safely and responsibly



Elements of Responsible Production

Responsible
Production supports
companies in:



Responsible Production

- Provides **tools** to be used by SMEs (their business partners, local authorities, and concerned public/communities) for improving:
 - **hazard identification**
 - **chemical hazard management**
 - **accident prevention**
 - **stakeholder engagement and communication**
- A practical toolkit for SMEs to enhance safety, community engagement, reduce environmental impacts, enable commitment to Corporate Social Responsibility



Responsible Production

A 5-step framework for improving chemical hazard management systematically:



Toolkit

1. IDENTIFY RESPONSIBLE PRODUCTION ISSUES

- UNDERSTAND THE PROCESS FLOW
- RISK ASSESSMENT AND PRIORITISATION
- STANDARDS, CODES, LAWS AND REGULATIONS

BASIC TOOLS

- Tool 1.1 Prepare process flow chart
- Tool 1.2 Chemical inventory and hazard classification
- Tool 1.3 Identify risks
- Tool 1.4 Hazard hotspots map
- Tool 1.5 Legal register

ADVANCED TOOLS

- Tool 1.6 Hazard classification (control banding)

2. GET THE RIGHT PEOPLE INVOLVED

- IDENTIFY YOUR STAKEHOLDERS
- UNDERSTAND YOUR STAKEHOLDERS AND HOW THEY ENGAGE
- ENGAGE YOUR STAKEHOLDERS
- PRIORITISE STAKEHOLDER ISSUES
- REVIEW THE ENGAGEMENT PROCESS

- Tool 2.1 Map stakeholders
- Tool 2.2 Profile stakeholders
- Tool 2.3 Select the engagement method
- Tool 2.4 Plan the engagement

- Tool 2.5 Prioritise issues
- Tool 2.6 Review engagement process

3. DEVELOP YOUR PLAN

- IDENTIFY RISK REDUCTION OPPORTUNITIES AND ANALYSE
- BUILD AND COMMUNICATE THE BUSINESS CASE
- SET OBJECTIVES, TARGETS AND INDICATORS
- PREPARE CONTROL ACTION PLANS
- DEVELOP TRAINING NEEDS ASSESSMENT AND PLAN
- DEVELOP EMERGENCIES PLAN

- Tool 3.1 Identify actions for risk reduction
- Tool 3.2 Risk reduction cost analysis
- Tool 3.3 Set goals, objectives, targets and indicators
- Tool 3.4 Chemical control action plan
- Tool 3.5 Training plan
- Tool 3.6 Emergencies plan

- Tools 3.7 to 3.11 prevent and reduce risk (per activity)
- Tool 3.12 Business case

4. PUT PLAN INTO PRACTICE, TRAIN AND COMMUNICATE

- DEVELOP, IMPLEMENT AND TEST BEST PRACTICE
- TRAIN YOUR WORKERS AND BUSINESS PARTNERS
- FOSTER RISK COMMUNICATION
- IMPROVE YOUR PROCUREMENT PRACTICE

- Tool 4.1 Best practices procedures
- Tool 4.2 Develop training materials
- Tool 4.3 Risk communication
- Tool 4.4 Product risk information

- Tool 4.5 Procurement checklists

5. EVALUATE HOW WELL YOU DID

- EVALUATE PERFORMANCE AND MANAGEMENT PRACTICES
- COMMUNICATE PERFORMANCE
- PROVIDE ASSURANCE

- Tool 5.1 Performance assessment
- Tool 5.2 Management assessment
- Tool 5.3 External communications

- Tool 5.4 Independent assurance



Tools

1

Identify responsible production issues

UNDERSTAND THE PROCESS FLOW

RISK ASSESSMENT AND PRIORITISATION

STANDARDS, CODES, LAWS AND REGULATIONS

By the end of the first step a **company should have a better understanding of what is it that needs to be managed** to assure the safe handling of chemicals.

2 Get the right people involved

IDENTIFY YOUR STAKEHOLDERS

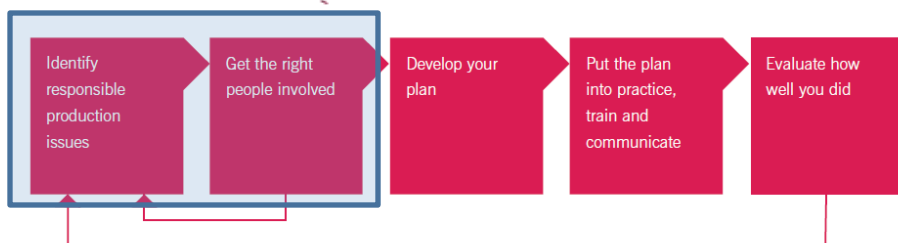
UNDERSTAND YOUR STAKEHOLDERS AND HOW THEY ENGAGE

ENGAGE YOUR STAKEHOLDERS

PRIORITISE STAKEHOLDER ISSUES

REVIEW THE ENGAGEMENT PROCESS

The second step provides an understanding of **who should be involved** for assuring that the safe handling of chemicals is as complete as possible.



Tools

3

Develop your plan

IDENTIFY RISK REDUCTION OPPORTUNITIES AND ANALYSE

BUILD AND COMMUNICATE THE BUSINESS CASE

SET OBJECTIVES, TARGETS AND INDICATORS

PREPARE CONTROL ACTION PLANS

DEVELOP TRAINING NEEDS ASSESSMENT AND PLAN

DEVELOP EMERGENCIES PLAN

4 Put plan into practice, train and communicate

DEVELOP, IMPLEMENT AND TEST BEST PRACTICE

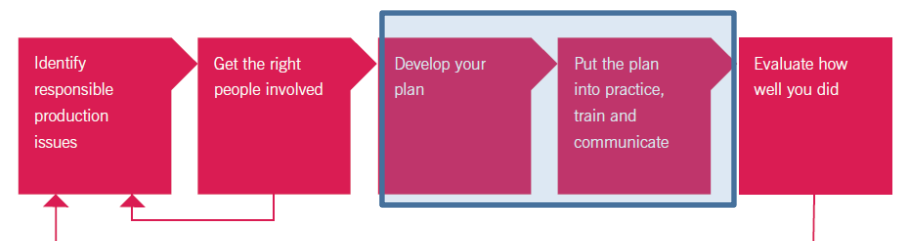
TRAIN YOUR WORKERS AND BUSINESS PARTNERS

FOSTER RISK COMMUNICATION

IMPROVE YOUR PROCUREMENT PRACTICE

Through Step 3 a company will be able to **plan the appropriate response** to the **chemical hazard issues** and **associated impacts** and then decide **when, how** and **with what resources** to meet those objectives

Through Step 4, a company will be assisted in taking the actions previously identified for controlling chemical hazards/ reducing the risks of operations and putting them into practice.



Tools

5 Evaluate how well you did

EVALUATE PERFORMANCE AND MANAGEMENT PRACTICES

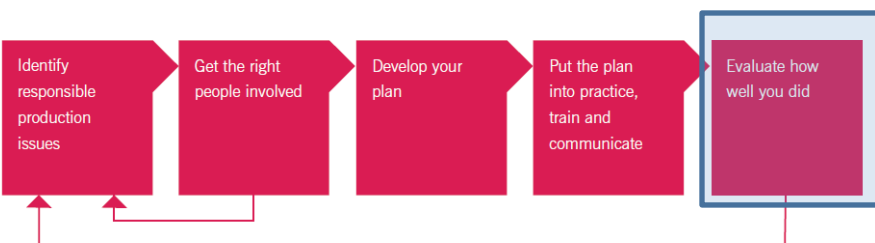
COMMUNICATE PERFORMANCE

PROVIDE ASSURANCE

Step 5 focuses on checking performance and comparing performance against **best practice benchmarks** and **make improvements** accordingly.

Each step of the 5- Step Model consists of sub steps and associated practical step-by-step tools to help a company understand:

- What they have to do?
- Why they have to do it?
- When they should do it?
- How they should do it?



Hazard Identification and Risk Assessment Tools

OPERATIONAL PROCESSES

CHEMICAL IDENTIFICATION
AND HAZARD
CLASSIFICATION

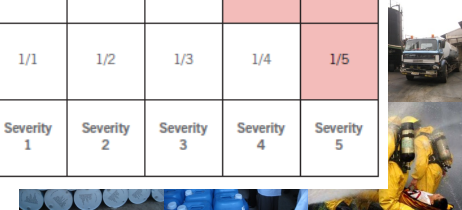
RISK ASSESSMENT
AND PRIORITISATION

STANDARDS, CODES
AND REGULATIONS



ACTIVITIES	TOOLS
Operational processes: understand the process flow	Tool 1.1 Prepare a process flow chart
Chemical Identification and Hazard Identification	Tool 1.2 Chemical inventory and Hazard Classification
Risk Assessment and prioritisation	Tool 1.3 Identify health, social, environmental and economic risks Tool 1.4 Hazard Hotspots map Tool 1.6. Hazard Classification: control banding (ADVANCED TOOL)
Standards, Codes, Laws and Regulations	Tool 1.5 Legal Register

Frequency 5	5/1	5/2	5/3	5/4	5/5
Frequency 4	4/1	4/2	4/3	4/4	4/5
Frequency 3	3/1	3/2	3/3	3/4	3/5
Frequency 2	2/1	2/2	2/3	2/4	2/5
Frequency 1	1/1	1/2	1/3	1/4	1/5
	Severity 1	Severity 2	Severity 3	Severity 4	Severity 5



Further tools

- Dashboard worksheets
- Good practice checklists
- Online version



responsible PRODUCTION
A FRAMEWORK FOR CHEMICAL HAZARD MANAGEMENT FOR SMALL AND MEDIUM SIZED ORGANIZATIONS

BOOKLET
UNEP's Responsible Production approach is a systematic, continuous improvement approach to chemical safety along the value-chain and provides a set of technical materials and tools to assist companies in a practical way.

TOOLKIT
The tools help SMEs understand hazards, control chemical exposure, reduce accident risks, engage stakeholders, and promote chemical product stewardship. It achieves this through risk planning, management and communication aimed at preventing exposure to hazardous substances along the value chain.

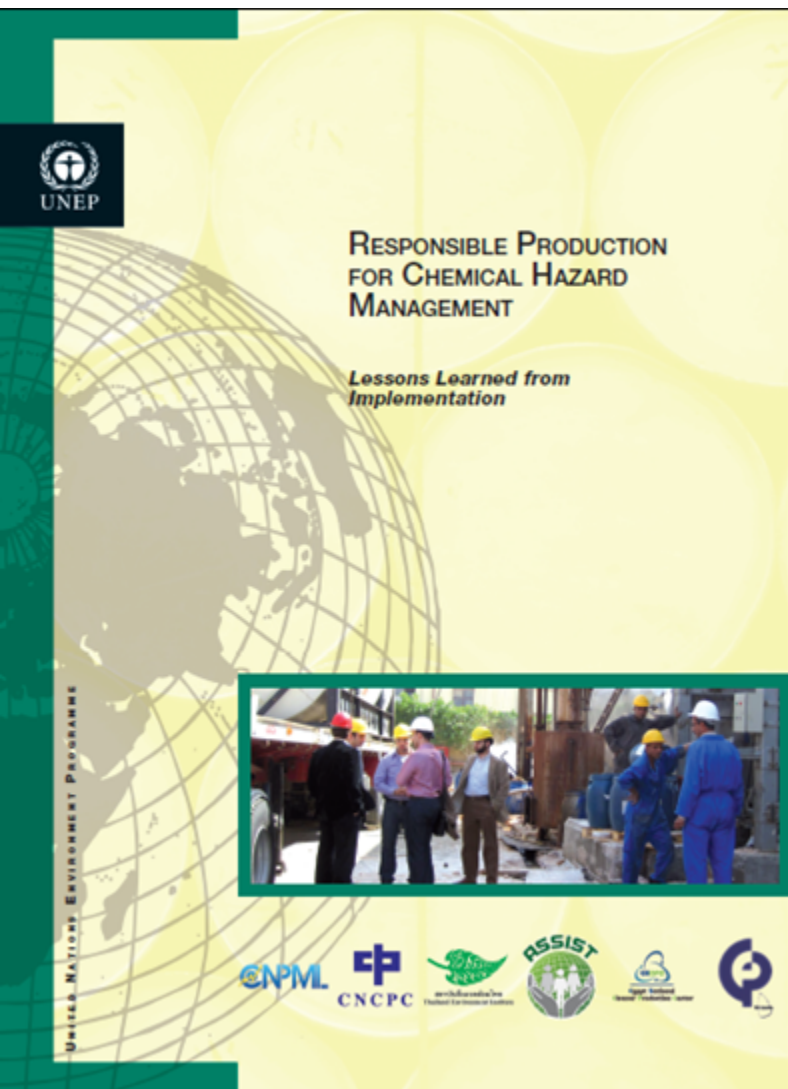
TRAINING PACKAGE
You will find in this package a **Booklet** explaining the Responsible Production approach, a **Toolkit** with a set of tools for application, and a **Training Package** with guidance for trainers.

Identify responsible production issues → Get the right people involved → Develop your plan → Put the plan into practice, train and communicate → Evaluate how well you did

about us | forewords | partners | contact us | acknowledgements | sitemap



Lessons Learned from Global Implementation

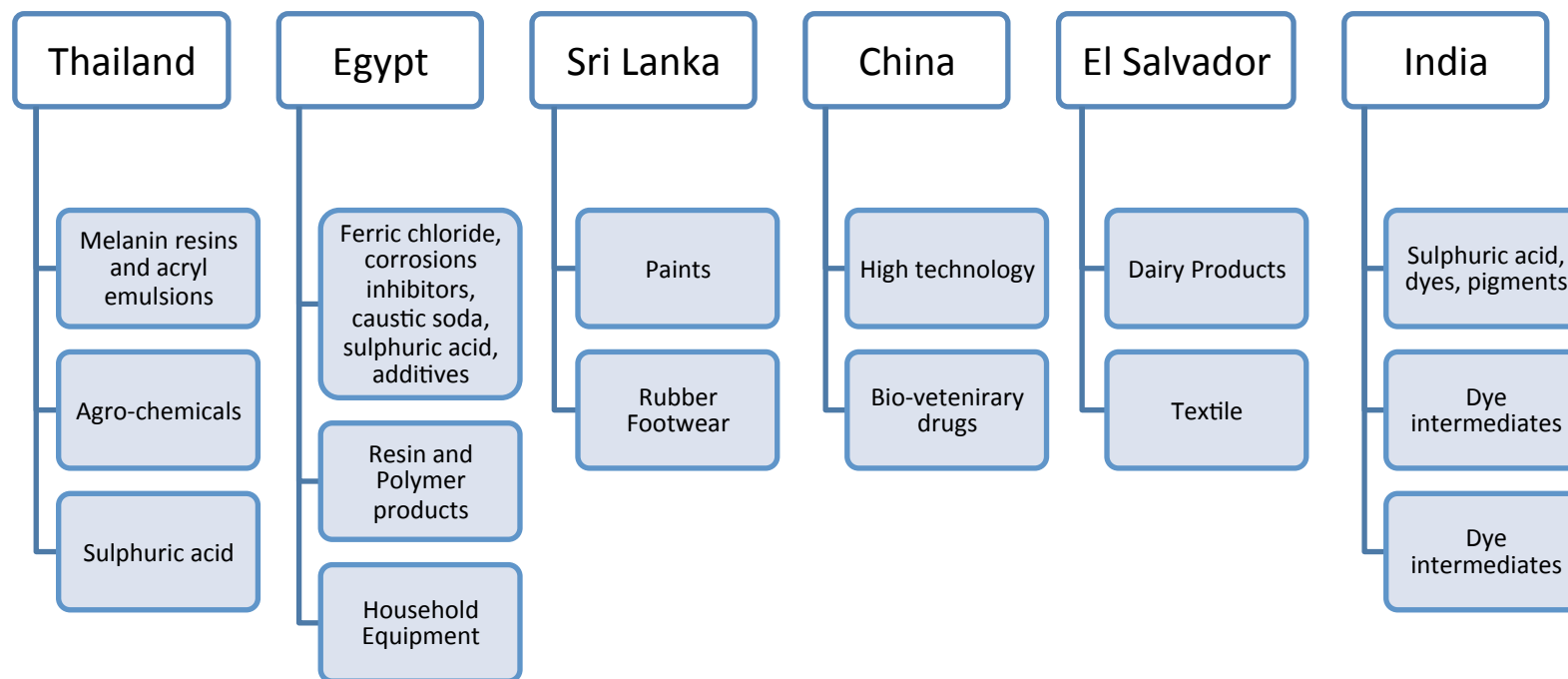


- Thailand
 - India
 - Sri Lanka
 - El Salvador
 - Egypt
 - China
-
- **Publication (2013):**
 - NCPCs
 - Local authorities
 - Industry Associations
 - Insurance Companies
 - Donors



Implementation of Pilot Projects

Overview of the case study sectors



Case study: Egypt

Process steps / Storage area	Chemicals	Hazard / Risk	Frequency/ Severity ²⁸	Priority	Risk reduction measure
------------------------------	-----------	---------------	-----------------------------------	----------	------------------------

- Before implementation



- After implementation

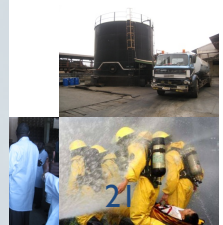


Case study: Sri Lanka

- Before implementation



- After implementation



In summary

Hazard identification



Risk Assessment



Risk Management

Next: Group Exercise on Simplified Hazard Identification and Risk Assessment

