



AccountAbility

# RESPONSIBLE PRODUCTION HANDBOOK

***A Framework for Chemical Hazard Management for Small and Medium Sized Enterprises***

***Incorporating Best Practice From:  
Safer Production  
APELL  
Corporate Social Responsibility***

UNITED NATIONS ENVIRONMENT PROGRAMME



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### BACKGROUND

**UNEP's Responsible Production approach** has been designed to build capacity for chemical safety management across the value chain. It engages businesses, supply-chains, distributors, traders and buyers in safer production, accident prevention and emergency preparedness. It does so in a manner that demonstrates commitment to core Corporate Social Responsibility issues such as: environmental impact reduction, workers safety, stakeholder engagement, community engagement, and supply-chain management.

**The Responsible Production approach** was developed by UNEP and AccountAbility in cooperation with the International Council of Chemical Associations (ICCA) and the International Council on Mining and Metals (ICMM). Other project partners included the European Chemical Industry Council (CEFIC), the European Process Safety Centre (EPSC), the Brazilian Chemical Industry Association (ABIQUIM), the Latin-American Science & Technology Development Programme (CYTED), the Netherlands Foundation for Applied Scientific Research (TNO), the Swedish Association of Mines, Mineral and Metal Producers (SVEMIN), and the European Association of Mining Industries (EUROMINES). The United Nations Industrial Development Organization (UNIDO) also contributed with technical inputs to the approach.

The development of the Responsible Production approach was supported by pilot cases or sites in Peru (in the mining sector) and Thailand (in the chemical sector). These provided important feedback that has resulted in a responsive and user-friendly approach. The pilot exercises were undertaken with the official support of the Department of Industrial Works of the Ministry of Industry of Thailand, Samutprakarn Provincial Government, the Ministry of Environment of Peru, and the Regional Government of Cajamarca.

National project partners included also the Thailand Environment Institute (TEI), the Chemical Industry Club of the Federation of Thai Industries, the Industrial Estate Authority of Thailand (IEAT), Mahidol University of Thailand, the National Society of Industry (SNI) in Peru, and the Peruvian National Society of Mining, Oil and Energy (SNMPE). In addition, a number of multinational companies, including Clariant Chemicals (Thailand), Antamina, Newmont Mining (Yanacocha), Golds Fields La Cima, and Barrick also partnered with UNEP in this project sharing their corporate best practice with the SMEs involved in the pilots. Rio Tinto also provided support to project activities in Peru.

This project has been funded by the Norwegian Government within the framework of UNEP's work on Sustainable Consumption and Production for Poverty Alleviation through Emergency Planning, Trade, Chemicals and Waste Management.

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## WHO IS THE RESPONSIBLE PRODUCTION APPROACH FOR?

In many developing countries and fast-growing economies, SMEs form the backbone of the industrial sectors where hazardous chemicals are manufactured, transported, repackaged and used. The risks associated with hazardous manufacturing and handling operations are having an increasing impact on business success, as well as on the environment and society.

The environmental and health consequences of unsafe chemical manufacturing and handling operations in SMEs are well known and documented. To set up effective safety management approaches, SMEs need to be involved in initiatives aimed at fostering chemical safety management and chemical risk information throughout the value chain. These initiatives need to engage stakeholders including workers, nearby communities and larger companies.

The Responsible Production approach is for those that do not have sophisticated management systems in place and who need to understand and realize the business and other benefits of:

- improved chemical hazard management,
- working with their stakeholders,
- sharing information on decisions and performance.

Though the role of managers and safety officers is emphasized, the **Responsible Production** approach will also benefit local authorities and government officials who have an interest in ensuring and enforcing responsible chemical hazard management.

Although it is aimed at SMEs it will also be of interest to large companies that do business with smaller entities and are looking for assurance on the way these companies are managing risks, without having to impose complex management systems.

## WHAT IS THE RESPONSIBLE PRODUCTION APPROACH?

The Responsible Production approach is a systematic, continuous improvement approach to chemical safety along the value-chain. It involves understanding hazards, controlling chemical exposure, reducing accident risks, engaging stakeholders, and promoting chemical product stewardship. It achieves this through risk planning, management and communication aimed at preventing exposure to hazardous substances along the value chain.

It is designed to increase overall safety and to reduce chemical emergencies and their environmental, social and economic impact by helping organisations address the hazards and risks related to the manufacturing, processing and handling of chemical substances in their operations. It will help managers and safety officers address not only chemical hazards at site, but also to promote chemical safety with business partners and suppliers, clients, and local communities. It does this by fostering risk communication and chemical safety information along the value-chain.

Most codes, guidelines and frameworks are written for large multinationals. For smaller organisations it is difficult to deal with too many different approaches all contributing to the same results. The Responsible Production approach combines the best of Corporate Social Responsibility, APELL and Safer Production in a simple and integrated approach appropriate for SMEs.

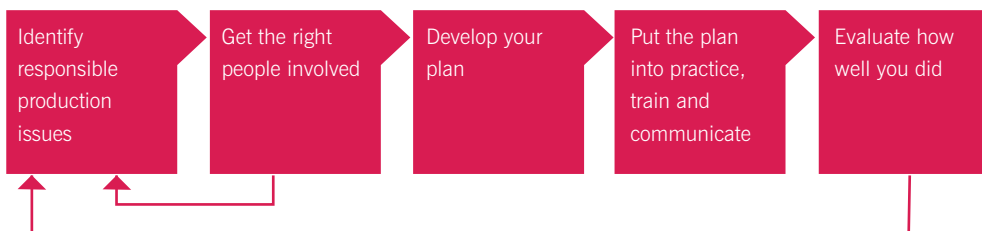
It helps SMEs move from a reactive approach to a preventative approach. It explains that Responsible Production should not be seen purely in terms of the cost of compliance but instead as central and beneficial to the core business. Responsible Production forces companies to look beyond the traditional and narrow site and operational view and adopts a value-chain focus that enables them to more effectively manage risks inside and beyond the factory gate.

### HOW IS THE APPROACH STRUCTURED?

This introduction, along with the Responsible Production Booklet and Toolkit, found in the Responsible Production Handbook, and the Responsible Production Training Package, forms the Responsible Production approach.

#### Responsible Production approach

The Responsible Production approach has five main steps. These steps provide a systematic approach to managing the risks and impacts associated with chemical hazards. This approach is not meant to be a stand alone system. It is meant to be integrated with management practices and procedures already existing in the company.



**Step One** is about understanding what has to be managed: identifying those hazards and issues that are most important to safety, performance and success, and that SME operators have to understand as fully or completely as possible.

**Step Two** ensures that the understanding of these issues is as complete as possible: the key message is that enterprises cannot develop this understanding unless they engage with the right people. It stresses the importance of being inclusive. It focuses on the issues and concerns of those people who can be affected by products, actions and decisions or whose actions and decisions can affect the SME and its performance.

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The next two steps are about how to respond: based on the understanding gained in the first two steps it will now be possible to develop the most appropriate action – taking into account current status and what it will take to improve performance on chemical safety issues. **Step Three** is about planning for success. **Step Four** is all about doing it.

The last step, **Step Five**, addresses improvement and transparency. The world doesn't stand still. Every successful organisation is constantly looking for ways to do better. The best way to do this is to check to see how well the organisation has done, to compare its performance with benchmarks for best practice, to make changes that will improve performance and then to report publicly on performance and future plans.

## Elements of the Responsible Production approach

### The 5-Step approach

The 5-step approach is supported by a process for evaluation. For each step of the approach there is a main indicator (Issue Knowledge, Engagement Effectiveness, Planning Effectiveness, Implementation, Evaluation and Communication). Each main indicator has a number of detailed indicators which help an organisation evaluate how well they are addressing each step. This self-assessment approach ensures that companies can locate weak areas and allocate resources in an effective way to maximize improvements.

### Guidance and Toolkit

Each step of the approach is supported by a number of tools. The tools are simple and practical. They contain templates that can be used immediately or can be adapted to make them more appropriate for specific enterprises. It is possible to pick and choose from the tools based on the needs and circumstances of different companies.

### Training Package

Training materials have been developed to support the Responsible Production approach. They are modular and linked to the framework. They provide practical examples that illustrate the value of the Responsible Production approach and how it can be implemented in practice.

## About the UNEP Division of Technology, Industry and Economics

The UNEP Division of Technology, Industry and Economics (DTIE) helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development.

The Division works to promote:

- > sustainable consumption and production,
- > the efficient use of renewable energy,
- > adequate management of chemicals,
- > the integration of environmental costs in development policies.

### **The Office of the Director, located in Paris, coordinates activities through:**

- > **The International Environmental Technology Centre** - IETC (Osaka, Shiga), which implements integrated waste, water and disaster management programmes, focusing in particular on Asia.
- > **Sustainable Consumption and Production** (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
- > **Chemicals** (Geneva), which catalyzes global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
- > **Energy** (Paris), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.
- > **OzonAction** (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
- > **Economics and Trade** (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies.

*UNEP DTIE activities focus on raising awareness, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.*

For more information,  
see **[www.unep.fr](http://www.unep.fr)**

*In many developing countries and fast-growing economies, Small and Medium Sized Enterprises (SMEs) form the backbone of the industrial sectors where hazardous chemicals are manufactured, transported, repackaged and used. To set up effective safety management approaches, SMEs need to be involved in initiatives aimed at fostering chemical safety management and chemical risk information throughout the value chain. These initiatives need to engage a wide range of stakeholders including workers, transporters, distributors, customers, authorities, nearby communities and other businesses including larger companies.*

*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. 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.*

*The approach is designed to be used by SMEs, but will also be of interest to larger companies that do business with smaller entities and are looking for a simple way to provide assurance on the way these companies are managing risks.*

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