RESPONSIBLE PRODUCTION TRAINING PACKAGE

Trainers support package on Responsible Production and Chemical Hazard Management for Small and Medium Sized Enterprises

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This is a trainers support package, and not a reference book. It does not give a systematic, comprehensive overview of Responsible Production (this is being provided in the Responsible Production Booklet and Toolkit that accompanies this package); rather, it focuses on some selected aspects that are central to chemical safety management and risk communication in Small and Medium Sized Enterprises (SMEs) along the value chain. The structure of this package allows further sections to be easily developed and added as additional modules.

This training package is written for trainers to provide them with support materials and ideas, rather than as a study book for students. The average trainee will only ever see a few pages or exercises reproduced from this document.

One of the purposes of this package is to provide some case studies and situation scenarios that can be used as a basis for interactive training, simulated planning and decision-making. However, the exercises only explore a small part of the potential of the case studies, and trainers are strongly encouraged to develop further exercises or tasks.

The package is intending at raising awareness to chemical hazards and risks, and to the benefits of systematical chemical safety management, within a value-chain approach. For teaching the factual knowledge base of the subject, trainers are referred to the reading lists in the bibliography.

Work exercises are predominantly based on interactive group work and a team approach to problem-solving. Such work needs to be guided by a tutor who is a recognized expert in the field. The exercises are oriented towards throwing light on useful approaches or management decisions than simply finding the "correct" answer. In some instances, answers are indicated. The "correct "answer depends on the context of the question. It is here that a tutor or external resource expert is useful.

Many trainers find this disturbing. They should remember that real decisionmaking depends on the wider circumstances surrounding the problem, and that an answer or approach that is socially unacceptable or administratively unworkable (even through accurate), is not in effect "correct".

The simulation of real life situations and decision-making that is the basis of this package makes it most suitable for senior students for professional training (or retraining) courses.

Finally, we must stress that this package does not cover all aspects of chemical safety management in SMEs and along the value chain. Its prime purpose is to lead trainers into this field, and to help and encourage them to develop their own material, appropriately tailored to their specific learning situation. UNEP is

prepared to work further with trainers who wish to extend this package into new directions, or to go into greater depths on some subjects.

HOW TO START A TRAINING ACTIVITY BASED ON THIS PACKAGE

1. Remember that this is a starters kit, and not a complete recipe book. Remember also that this training package aims to develop basic awareness, planning and decision-making, not to convey knowledge or facts.

2. Understand the needs of your trainees. What insights or skills do you intend to develop? Define your learning objectives.

3. Refresh your memory by reading the accompanying Responsible Production Booklet and Toolkit and by studying the suggested training materials.

4. Identify some expert resource persons who could be invited as tutors to help you in discussion sessions.

5. Select some of the exercises you wish to present to trainees.

6. Examine carefully the case studies or scenarios on which they are based. Be sure that you have at least one solution to the exercise that you can explain and defend.

7. Develop other exercises or questions yourself.

8. Develop your own local case study if you can, and use this instead of the ones in the package.

9. Prepare some background questions and preliminary exercises for trainers to carry out before they start the course.

10. In session, summarize the issues for trainees using the suggested slides, and others you may have. Discuss the problems and difficulties that workers, managers, and other decision-makers face. Discuss where factual information can be found to help in decision-making.

11. Commence the work sessions, preferably in small groups, and preferably guided by a tutor. Discuss and compare results. Be open to ideas and experiences from trainees, and discuss these.

12. Return to the learning objectives, and check that they have been achieved.

13 Consider how to follow up and reinforce the learning experience by establishing some ongoing projects, or periodic reunions.

1.1 BACKGROUND

In many developing countries, SMEs form the backbone of the industrial sectors where hazardous chemicals are manufactured, transported, repackaged and used. Unsafe manufacturing and handling operations in SMEs has documented environmental and health consequences. To set up effective internal safety management approaches and to start dialogue and ongoing communication with workers and nearby communities, SMEs need to be involved in initiatives involving other stakeholders, including larger companies, aimed at fostering chemical safety management and chemical risk information up and down the value chain.

For this, the Responsible Production approach aims at providing SMEs with the necessary tools for engaging businesses, supply-chains, distributors, traders and buyers in accident prevention and emergency preparedness in a manner that demonstrates companies' commitments to CSR core elements related to chemical risk reduction, environmental impact reduction, stakeholder engagement, community engagement and supply-chain management. The main focus is to increase overall chemicals safety and consequently reduce environmental emergencies in the operations of SMEs.

The training sessions in this package were designed to be easily adapted by users for the development and implementation of training programmes tailored to the needs of each company.

Target users of this package include technical institutes or similar organizations, industry (company management and staff) and people working with industries such as industry associations, consultants, non-governmental organizations, government agencies, research institutes, or academic institutions.

1.2 CONTENTS OF THIS PACKAGE

The purpose of this package is to provide guidance to trainers. The package explains:

- the objectives and target audience;
- trainers requirements;
- the aims of each session;
- how to best deliver each session (suggested approach and detailed guidance);
- how to assess participants; and
- how to evaluate the course.

This part contains advice on how to ensure maximum effectiveness as a trainer and how to organize effective training activities and presentations. This advice is provided before considering the technical materials

2.1 INTRODUCTION

Communication and organizational skills are just as important as a technical appreciation of the subject. Professional educators already understand this point, but teaching is a very individual matter, and interactive teaching can be very demanding on a busy person.

This section builds upon similar guidance previously published by UNEP within the scope of the Trainer Resource Package on Cleaner Production series of publications.

This text contains advice on:

- How to ensure maximum effectiveness as a trainer.
- How to organize effective training activities and presentations.

This advice is being provided before consideration of the technical materials, so that readers can remind themselves of the importance of the advice when choosing work exercises and training materials later in this package.

To ensure the success of the training, trainers' skills are as important as the training material. Each trainer has critical responsibility as he / she is the one interacting directly with participants. First of all, the trainer should have good facilitation and pedagogical skills to undertake a dynamic and interesting training session for participants. They should also have advanced command in the language in which this training package is written, and on the language used during the course.

The trainers should also have a good understanding of the Responsible Production Handbook as a whole, including the Responsible Production Booklet and Toolkit. Trainers can refer to these two elements of the Responsible Production Handbook and to other referenced materials and documents. Knowledge and experience on responsible production, safer production and emergency planning as well as in chemical safety would be an advantage, as the trainers could illustrate the presentations with concrete examples, thus increasing their credibility with the audience.

Technical expertise on particular subjects can be an asset depending on the sessions.

2.2 GENERAL TRAINER REQUIREMENTS

2.3 SUGGESTIONS FOR EFFECTIVE COMMUNICATION AND TRAINING

Communication

If the training is to be successful, effective communication is essential during all preparation steps and during the training itself.

Some simple communication considerations will help trainers to improve training outputs and undertake a successful training event:

- Communication amongst the course designers, writers, and event organizers and presenters is essential to be consistent in delivering the training.
- Discuss with companies and participants about their specific needs to adapt the training.
- Communicate with participants on the objectives and content of the training sessions (see below "Engage participants").
- Consider the time of the training. Make sure the training is not starting too early or lasting too long in order to keep participants' attention.
- Consider the local context and culture, local public holidays, social roles, etc.

Training

An effective training session depends directly on the level of preparation beforehand. Logistics and adequate training materials should be cared of in advance. The way to engage and approach participants is also something to consider carefully before initiating a training session.

The following suggestions will help trainers in adapting the suggested support materials in this package, and in preparing for delivering effective training sessions.

Preparing a good training session

Logistic needs:

- Choose the location for the training and book in advance.
- Participants should be provided with maps and transportation schedules to reach the location where the training session will take place.
- Make sure all facilities and equipment are in good working order.
- Arrange catering.

Training materials:

- Choose the materials for the session.
- Adapt materials to the needs of the participants, course agenda, and duration
- Prepare handouts on all materials covered, with references for further information. The participants can refer back to it during and after the meeting.
- Prepare extra copies.

- Eventually give the participants a "pre-event task" for interactive sessions. For example, when training company workers you can ask them to "list the chemical hazards handled in your plant" or "bring your company emergency plan if any". However, the trainers should not rely on participants' participation to pre-event tasks.
- Pre-event tasks should include the collection of the following materials (if available) by participants prior to the training:
 - layout maps and process diagrams;
 - area maps and information on routes used for the transport of chemical raw materials, products, by-products, and wastes;
 - lists of chemical raw materials, products, by-products, and wastes, and respective hazard classification where available;
 - list of suppliers, contractors, transporters and customers;
 - estimates of the quantities of the chemicals usually involved or present in each activity (including off-loading, storage, processing, transport);
 - final destination of chemical wastes;
 - purchasing records;
 - inventories (including chemical names, trade names / CAS numbers);
 - material safety data sheets (MSDS);
 - stock control records (including amount in use, where they can be found / stored / used);
 - other information on the locations of hazardous chemicals on site;
 - notes about chemical handling, use, storage, and disposal conditions etc;
 - results of previous risk analysis;
 - information on past accidents / emergencies;
 - numbers of workers undertaking activities where hazardous chemicals (raw materials, products, wastes) are involved;
 - information on existing communities / urban areas in company surroundings and along the routes used for the transport of chemical raw materials, products, by-products, and wastes;
 - information on the existence of other hazardous activities (other chemical companies, fuel storage facilities etc) in the surroundings and along the routes used for the transport of chemical raw materials, products, by-

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