PROMOTING CHEMICAL SAFETY FOR CHILDREN IN RURAL AGRICULTURAL COMMUNITIES IN UGANDA

TRAINING MANNUAL FOR LABOUR UNION WORKERS.

MODULE 01
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACB</td>
<td>Agrochemicals Control Board</td>
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<tr>
<td>FAO</td>
<td>Food and Agricultural Organisation</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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<td>ILO</td>
<td>International Labour Organisation</td>
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<td>ICCM</td>
<td>International Conference on Chemicals Management</td>
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<td>MGLSD</td>
<td>Ministry of Gender, Labour and Social Development</td>
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<td>MSDS</td>
<td>Material Safety Data Sheet</td>
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<td>NEMA</td>
<td>National Environment Management Authority</td>
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<td>NUPAW</td>
<td>National Union of Plantation and Agricultural Workers</td>
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<td>OSH</td>
<td>Occupational Safety and Health</td>
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<td>PPE</td>
<td>Personal Protective Equipment</td>
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<td>PROBICOU</td>
<td>Pro-Biodiversity Conservationists in Uganda</td>
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<td>SAICM</td>
<td>Strategic Approach to International Chemicals Management</td>
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<td>SMC</td>
<td>Sustainable Management of Chemicals</td>
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<td>UNEP</td>
<td>United Nations Environment Program</td>
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</table>
Exposure to agricultural chemicals, especially pesticides, poses an increasing health risk to agricultural communities. Pesticide sales and use have continued to climb over the years. In Uganda, workers, farmers and their families face correspondingly greater risks arising from the increasing use of more toxic chemicals – which chemicals may even be banned or restricted in developed countries. Quite often, while at work, these people do not use suitable Personal Protective Equipment (PPE) because of many reasons: It may not be available, or it is too costly, inappropriate, uncomfortable, or simply the people don’t have correct appreciation and application techniques. Sometimes, the equipment is poorly maintained, the chemicals and equipment are kept in inadequate storage, and there is reuse of old chemical empty containers for food and water storage. The end users often do not have access to information on the risks associated with the use of chemicals and or the necessary precautions and correct dosage. They are the silent sufferers of the dangerous aspects of agricultural chemicals.

Pro-biodiversity Conservationists in Uganda (PROBICOU), in partnership with the Ministry Of Gender Labour and Social Development (MGLSD), UNDP, Labour Unions, have been implementing activities on safety and health in agriculture focusing on the promotion of voluntary, participatory and action-oriented measures to improve working conditions that minimize exposure to chemicals. To this end, this training manual has been developed to guide training of workers’ leaders, workers, occupation safety and health officers, supervisors, to transfer knowledge and make practical improvements in agricultural communities with a view to safeguard workers, their families and particularly children. Wherever and whenever pesticides are applied in agriculture there is the need to make sure that the applicator is able to protect himself and his community adequately against contamination.

HON. KARORO OKURUT

MINISTER OF GENDER LABOUR AND SOCIAL DEVELOPMENT.
ACKNOWLEDGEMENTS

This training Manual has been done with assistance and input from a number of stakeholders as required by the principle of multi-sectoral, multidisciplinary, consultative and participatory approach. On behalf of PROBICOU, I extend gratitude to all the persons, institutions, departments who contributed their commitment, experience, knowledge, and time to this training Manual.

The following individuals and institutions are especially noted for their contributions in various capacities:

As members of the Project Management Unit Team
1. Mr. Twebaze Paul
2. Mr. Guma Bens
3. Dr Ogaram David
4. Mr. Nathan Makureguye

As Members of Institutions: -
1. Hon Pajobo Joram – The National Union of Plantation and Agricultural Workers of Uganda;
2. Ms Kassede Christine – The National Environment Management Authority (Ministry of Water and Environment);
3. Mr Katula Yusuf – The Department of Occupational Safety and Health (Ministry of Gender Labour and Social Development).
4. Mr Byantwale Steven – The Department of Crop Protection (Ministry of Agriculture Animal Industry and Fisheries).

Dr. Ogaram David served as the team leader and put the manual together. We are also grateful to Prof. Katima Jamidu for his advisory role as an international consultant.

Finally, PROBICOU thanks its partners SAICM, UNEP, GEF, UNDP and the facilitating Government agencies (Ministry of Gender, Labour and Social Development; Ministry of Agriculture Animal Industry and Fisheries, and the Ministry of Water and Environment) for their support.

We all look forward to a safer working environment, better infrastructure for sustainable management of chemicals and improved environment and human health.

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Mr. Robert Tumwesigye Baganda
EXECUTIVE DIRECTOR – PROBICOU.
1.0 INTRODUCTION

This is a brief training manual for Labour Unions prepared to enable them achieve safety and health at work and fulfil legal obligations, namely, to provide a safe working environment in Uganda.

The problem being addressed

The management of health and safety at work particularly for chemicals is inadequate. Every employer is required to put into place appropriate Occupational Safety and Health (OSH) measures for its workers. Workers themselves need to participate in these measures positively. The need for OSH measures is stressed in the labour laws of Uganda. Section 13 of the Occupational Safety and Health Act No 9, 2006 places the following burden on the employer:-

Duty of employers to protect workers

(1) It is the responsibility of an employer-

(a) To take as far as is reasonably practicable, all measures for the protection of his or her workers and the general public from the dangerous aspects of his or her undertaking at his or her own cost;

(b) to ensure, as far is reasonably practicable, that the working environment is kept free from any hazard due to pollution by-

(i) employing technical measures, applied to new plant or processes in design or installation, or added to existing plant, processes or where this is not possible; or

(ii) Supplementary organizational measures.

The measures required in this section are spelled out in the subsequent sections of this law. The employer is required to:

i. Provide personal protective equipment and cause them to be used (Section 19);

ii. Supervise the health of the workers (Section 21);

iii. Keep medical records of workers (section 22);

iv. Provide safe premises of work (Section 26);

v. Provide for health and welfare of the workers including adequate sanitary conditions, wholesome drinking water, washing facilities,
washrooms among others (Part VIII of the law (Sections 45 to 55);
vi. Take general safety measures (Section 56);
vii. Provide fire precautions (Section 57); and
viii. Manage toxic materials (Section 85).

The following other labour laws give further responsibility to the em-
ployer to provide safety and health to his or her employees, to compensate
those that get injured or develop disease, and to negotiate and implement
the terms of conditions of work (Collective Bargaining Agreements) with
labour unions: -
i. The Worker’s Compensation Act Cap 225
ii. The Employment Act No 6, 2006
iii. The Labour Unions Act No 7, 2006
iv. The Labour Disputes Act No 8, 2006

This training programme supports these efforts and it is developed to
equip the workers with adequate knowledge and skills to implement the
legislation and cause safety and health to be realised by the workers in
these establishments.

2.0 BACKGROUND

Exposure to agricultural chemicals, especially pesticides, poses an in-
creasing health risk to agricultural communities. Pesticide sales and use
have continued to increase over the years.

In Uganda, workers, farmers and their families face correspondingly
greater risks arising from the increasing use of more toxic chemicals –
which chemicals may even be banned or restricted in developed coun-
tries. Quite often, while at work, these people do not use suitable personal
protective equipment because of many reasons: It may not be available,
or it is too costly, inappropriate, uncomfortable, or simply the people
don’t have correct appreciation and application techniques. Sometimes,
the equipment is poorly maintained, the chemicals and equipment are
kept in inadequate storage, and there is reuse of old chemical empty con-
tainers for food and water storage. The end users often do not have access
to information on the risks associated with the use of chemicals and or
the necessary precautions and correct dosage. They are the silent sufferers of the dangerous aspects of agricultural chemicals.

PROBICOU’s research and advocacy activities on safety and health in agriculture have been focused on the promotion of voluntary, participatory and action-oriented measures to improve working conditions in agricultural work in Uganda. To this end, the “Inventory of Dangerous Chemicals, Processes and End Point Discharges” has been carried out aiming at making practical improvements in agricultural communities with a view to safeguard workers, their families and particularly children. Wherever and whenever pesticides are applied in agriculture there is the need to make sure that the applicator is able to protect himself and his community adequately against contamination. This training manual supports the inventory by equipping labour unions with ability to expand their knowledge base.

3.0 MISSION STATEMENT

The mission of OSH management is to recognize, evaluate, and control occupational safety and health hazards and agents that propagate them to degrade human health and the environment.

Sustainable OSH management should therefore be seen as a means to secure a minimum standard of human health and environment quality. This is achieved through administrative, legal, and technical measures with a view to ensure protection of human health in line with the prescriptions in the law.

However, all said and done, it is not the rigorous enforcement based on utilising the sanctions of the law to the full that counts. This only leads to conflict between the investor on one hand and the law on the other. This is counter productive. Rather it is the training, advocacy, provision of information, cooperation, as well as giving technical guidance and assistance to realize a better and comfortable environment and promotion and persuasion leading to sense that really counts. Consequently the mission of the training programme is to produce an OSH manager or supervisor
at the site who has competence to achieve the above OSH mission. Correspondingly, in the proposed training programme, there is a need for a built-in aspect of ensuring cooperation between the employer (the investor/development partner), the inspector (Government), and the labour unions. This is necessary in order to achieve success. It needs to be emphasized that OSH management is a shared endeavour and the law is not the only instrument for achieving it.

4.0 BASIC DUTIES OF AN OSH MANAGER

The training programme must take cognisance of the functions and duties of an OSH manager in the premises. It is the duty and function of the employer and the workers OSH manager/supervisor to ensure worker and workplace surveillance of areas under his or her control. He or her should: -

i. Visit on routine, on call or on planned survey the workplace or under takings or any area of OSH interest with a view to recognise, evaluate and control OSH hazards and ensure compliance with established legal measures and policy;

ii. Conduct investigations, studies, and analyses of particular events or phenomena in the work place for deleterious effects or occurrences;

iii. Carry out or ensure or cause on spot sampling or measurements and laboratory analysis of samples collected from the premises;

iv. Gather timely and authoritative information and compile statistics of all measurements and analyses, health statistics, and deduce overall trends of the state of effects and outcomes in the work place;

v. Recommend medical examination of exposed persons or any other specific examination of any member of the working environment system or any necessary investigation in places where exposure to dangerous contaminants have been found to be excessive;

vi. Draw attention to technical measures, which, as far as is reasonably practicable, should be taken to improve the quality of the working environment and prevent disease or impairment to health or any further degradation or indeed cause restoration of the working ement;
vii. Compile and keep an up-to-date inventory of all industrial processes in which materials likely to cause working environment damage or health hazards are used; and to compile a hazardous material data sheet for each material that includes the nature of hazard and control measures for such hazards;

viii. Carry out audits of industrial processes and advise top management on measures to take in protecting the working environment, and develop methods of prevention and mitigation of any undesired effects of such processes;

ix. Write the management reports, monthly, and annual reports to the top management of the enterprise as regards activities and findings of the enterprise activities; and

x. Give technical opinion, advice or information to the top management of the enterprise.

In order to carry out his/her duties competently, the OSH manager/supervisor requires training.

5.0 THE REQUIRED TRAINING

Training is concerned with the acquisition or development of knowledge, skills, techniques, attitudes and experiences, which enable the individual to make his most effective contribution to the combined effort of the team of which he is a member.

5.1 Objective

The objective of training is to prepare the individual staff to carry out supervision and advocacy satisfactorily, or to prepare him or her for greater responsibility.

Training aims to change the person. As one progresses from, say, a peasant farm to the boardroom of the enterprise, the importance of intellectual capacity and personality characteristics increases, until eventually the object of training becomes, essentially the development of sound judgment. Ultimately the trained person has sound judgment.

As regards OSH management, there is little need to distinguish between education and training.
One cannot be interested and involved in training without at the same time being interested and involved in education. The results that can be achieved in OSH management training will be limited in a very real sense by the quality of the basic education, which the trainee has received in the past and which sometimes is necessary to supplement.

5.2 Main areas of training

The following are the main aspects of concern for training of the OSH manager/supervisor:

i. Knowledge: Knowledge can be taught. The participant in chemical safety management is helped to learn, to understand, and to remember facts;

ii. Skills: A skill is a physical act such as operation of an instrument to produce results, for example, using a spectrometer, making a watch, playing a guitar, etc. The participant needs skills to carry out his chemical safety management duties;

iii. Techniques: This is the application of both knowledge and skill. It is a way of behaviour or thinking in a dynamic situation for example, sampling effluent, inspecting a chemical waste dump site, measuring noise, heat, air pollution, etc.;

iv. Attitudes: This is a wide subject on which much has been written about and yet a broad range of opinions are held. Attitudes can be based on fear, prejudice, ignorance, superstition etc. In workplace inspection exercise, there is reasonable hope of changing undesirable attitudes based on ignorance;

v. Experience: This differs from others above in that it cannot be taught in a classroom. It is the result of practicing the use of knowledge, skills, and techniques over a period of time and in a number of different situations. It is the duty of the trainer to arrange the experience of trainees on an organized basis.

vi. Sound Judgment: This is particularly applicable in the field of executive development. It is the use of the combination of knowledge, skills, techniques, attitudes, and experience.
vii. Teamwork: Ultimately the OSH management system, by design, will need teamwork. To achieve this, persons need to know why they are in the system and so they need orientation; they will need to know each other and each other’s capabilities in order to build trust; they need to have clear goals, roles, and what they are doing; they need to know who is doing what in the team in order to avoid apathy and resistance; they need commitment; implementation methods and loading proportions; they need to master what they are doing in order to get the necessary high performance.

Broad knowledge in particular is the key to OSH management. All the current managers/supervisors in their respective fields have a variety of specializations at different levels. Therefore there is a need to establish a common level of knowledge across the board so that every trainee has a shared vision in which everyone knows why they are engaged in the OSH activity. Consequently it is necessary to determine the relevant subjects of this knowledge required by the trainee and among a team of managers whose task is to oversee the management OSH. The trainee should be adequately familiar with and have knowledge on the physical, biological and social environment at work.

From the above named tasks and the areas of knowledge required, the following broad aspects need to be addressed by training, namely the provision of:

i. Technical OSH subject matter;
ii. Understanding of the regulatory processes concerned;
iii. The ability to explain rights and responsibilities to the site manager relative to the national legislation;
iv. The ability to negotiate agreement in case of disputes.

5.3 Target group for Training

The trainees originate from different labour unions and different sections of production with varying concerns on OSH. Consequently the training programme should be designed to address this varied situation by providing levelling information and synchronising their understanding, activities and responsibilities. A holistic approach is called for.
5.4 Practical Criteria affecting the design of training programmes

Once the objectives have been set as above, the training programme must be designed to meet those objectives.

It is sometimes impossible to provide all the necessary facilities to run the desired training programme. Where limitations exist the programme should first be written to the highest possible standard and then adjusted to meet the practical situation. This approach has the following advantages: -

i. A standard is set. The effect of the limitations can be seen. Management has a target to aim for.

ii. The programme designer is dealing with one thing at a time. First, the elements of a training programme; second, the limitations. It is very difficult to consider both aspects at once.

iii. Future adjustments, to meet changing conditions, are more easily made.

The most common practical considerations, which may limit the training programme, are cost, urgency, availability of space, and availability of instructors and of training material.

5.4.1 Cost

For a small institution, this aspect can be a particularly difficult problem to decide upon. Sometimes the best appears too expensive and second best is accepted. Several costs are involved: -
  i. the cost of trainees’ time;
  ii. the cost of trainees’ mistakes (waste);
  iii. the cost of accidents;
  iv. the cost of labour turn over; and
  v. the cost of instruction.

All these have been taken into account when deciding what is “too expensive”. 
5.4.2 Urgency

In the same way that money may be wasted, so time, in the long run, may be wasted by what appears at first sight to be a saving. The labour unions require urgent training to prevent further occurrences.

If the trainees do not reach the required standard, further time will be taken up with more training. If the trainees feel any sense of failure this additional time may exceed the time originally “saved”.

For labour unions, which are institutions with a diversity of targets trainees, this is a problem, which may affect the implementation of the training programme. This should not be the case for the labour unions that have the strength of numbers.

5.4.3 Space or Venue

There is no real substitute for a well-equipped training area or centre for off-the-job training. However, imaginative innovations can be made to transform available space into a training area. Off-the-job training can be successful in these places if every possible effort is made to create the right conditions for learning (e.g. minimum distractions, light, air, cleanliness, availability of visual and other aids). What is required is to give trainees the best learning opportunity without giving them a false impression of the work situation. It would be best to carry this training outside the premises of the enterprise.

5.4.4 Availability of Instructors

If there are not enough trained instructors available it will be impossible to run a full training programme to the desired standard.

There is no substitute for a trained instructor, but a lot can be done to help the person who has to give instruction before he can be booked on an instructors’ course. These include equipment and welfare.
5.4.5 Availability of Training Material: “Training Material” covers everything from manuals to large machines:

i. Manuals and other written reference material - Much of an instructor’s time that is spent talking may be saved if suitable written material is available for study by the trainee. Manuals and simple job cards (like training programmes) must be designed specifically for a particular type of trainee. If they are not available the training programme will suffer. There is no quick or easy solution. The written material must be produced at the earliest possible date. There is a cost for this item.

ii. Written material for exercises, case studies, etc. - There is a lot of written material of this sort available but it is often hard to find the one, which meets the specific training need. An experienced trainer can usually amend existing material or, better still, write his own. If this is not possible, the next best solution is to look for another method to meet the training need rather than to “make-do” with something that does not quite fit the programme.

iii. Films and film-strips - These offer variety in a training programme, but like exercises and case studies it is often hard to find the “right” one. It is sometimes difficult to choose between the benefit to be gained by way of variety, which helps maintain the trainees’ interest and the knowledge that the particular film (or film-strip) is not ideal for the training purpose. The guideline is that it is never worth putting items into a training programme just for the sake of variety. If the item does not help to meet the over-all training need it may confuse.

iv. Visual aids - A larger proportion of what people learn is learned through the sense of sight. Good visual aids are, therefore, an important element of training programmes. If these aids are not available, they can usually be made quite easily. It is not necessary to produce elaborate “works of art”. Some of the best visual aids are simple to draw or make. It costs time to produce them well. If the instructor is not very good at preparing them, there is usually somebody employed by the training institution who can help.
5.4.6 Availability of practicals – OSH management is a hands-on job that requires adequate field experience to be imparted to the trainee during the training. The course needs to be designed such that the participants have adequate practicals and visits to representative selected exercise sites. This will be done in the factory.

6.0 WAY FORWARD

There is a need to develop a tailored OSH course for capacity development of the labour unions. This document suggests one.

The labour unions should arrange the intensive training course for their workers especially in agriculture and industry. The trainees are to be assessed throughout the course and certified at the end of the course.

As mentioned above the course should be designed to provide background technical levelling knowledge, skills, and relevant experience that the OSH management and advocacy demands.

It is best that the course be administered as a single-dose course. This would provide the necessary efficacy that would change knowledge, attitudes and practices appreciably and permanently. However owing to productivity demands of the enterprise, this can be divided into three different training arrangements.

6.1 Course planning

The parameters for the planning are to have themes on OSH through application of background knowledge from presentations to a real situation. The attitudes, views and experiences that each participant has on the subject are allowed to come out to be shared and polished through discussions that are provided during each presentation. In consonance with this, participants are afforded a one HALF-DAY visit to a relevant site with a one half-day follow up workshop on their inspection report.

Further to this, participants are given personal assignments through which they can integrate their own specialities. The course is 40% practical in order to ensure development of necessary skills. It is 20% discursive in order to make it relevant and participatory.
It is 40% relevant knowledge in order to advance the understanding of the target group.

6.2 Purpose and objectives

The purpose of this course is to put focus on the various basic themes relevant to OSH, provide and update the knowledge and skills, and give tools to the trainees to carry out the assessment of working environment threats and control them. To do this requires taking the participants through a range of subject areas of importance for effective environment inspection. The subjects are outlined in fair detail in the module described below.

6.3 Output and learning objectives

On completion of the course it is expected that the participants would be able to:

i. Identify and assess work environment hazards and set the correct priorities for effective inspection and management;

ii. Communicate more effectively with all parties involved and whom they may meet in the course of their work;

iii. Analyse problem situations in depth and make effective decisions;

iv. Present themselves more confidently in the face of problems and conflicts involving the working environment;

v. Encourage and motivate all parties to actively take part in improving their own working environment;

vi. Take initiative towards improving future and existing OSH policy and arrangements in the enterprise and make recommendations to cover in a more effective manner the welfare of the working environment.

6.4 Course Methodology

Several approaches are assembled together:

i. Participants are exposed to presentations, numerous discussions, group assignments and workshops and individual assignments;

ii. Site visits, practicals, and exercises are included in the programme so as to provide opportunity to relate the learning acquired to real life situations. Each of the visits includes a group task in which the group is requested to prepare and present a report on its findings;
iii. Individual participants are encouraged to participate fully in the group exercise and the completion of the assignment task. Variation of presenters within the ensures that each person has an opportunity to improve his/her presentation skills;

iv. Individual assignments ensure opportunity to every participant to have a hands-on-the-job exercise since in the final analysis each inspector will largely work on his/her own;

v. Interactive computer programmes on the various subjects is provided with a view to familiarise the participants with the information technology currently available.

6.4.1 Administrative arrangements
The planned course demands a high level of organisation, administration, planning and modalities, and supervision. Failure on this aspect will cause frustration to all concerned and will greatly damage the course. The onus of sorting this out is left to the unions.

6.5 Course content
The modules in terms of contents are summarized for each session in the tables below:-

6.5.1 SESSION ONE: Orientation and preliminaries (8 hours)
Objective
To welcome the participants, establish an appropriate atmosphere of relaxed professionalism, and provide orientation and rapport to the participants. In particular, the objective is to enhance the partnership between various participants, their parent industry/sector, the working environment, and the instructor.
6.5.1 SESSION ONE: Orientation and preliminaries (8 hours)

Objective
To welcome the participants, establish an appropriate atmosphere of relaxed professionalism, and provide orientation and rapport to the participants. In particular, the objective is to enhance the partnership between various participants, their parent industry/sector, the working environment, and the instructor.

<table>
<thead>
<tr>
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<th>Concepts and Time Required</th>
<th>Materials Provided</th>
<th>Additional Materials Needed</th>
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<tbody>
<tr>
<td>1. Presentation: Introduction and overview of module</td>
<td>The Significance of “OSH Management”: Goals, Objectives, Outputs, Outcomes, Activities, Inputs – worker-workplace system, unplanned events. Total time = 1 hour</td>
<td>Handout</td>
<td>Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>2. Exercice and présentation on Définitions: – OSH concepts and terminologies –, audits, monitoring, surveillance, risk, hazards, exposure, etc.</td>
<td>Ideas about development projects and the working environment: the nature and role of OSH, working environment process, audits, monitoring - the perspective of the participants. Total time = 1 hour</td>
<td>Handout</td>
<td>Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>3. Presentations, exercises, and discussions</td>
<td>Ideas about the working environment: the nature of interaction with materials and equipment on one hand and human development - the perspective of the participants and the technical perspective. Total time = 1 hours</td>
<td>Handout</td>
<td>Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>Session</td>
<td>Description</td>
<td>Materials Required</td>
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<td>4. Presentation, exercise, and discussion</td>
<td>Overview of the OSH management process: workplace planning; the hazards, the methods of control; monitoring, auditing, the surveillance process and the context in which it occurs and relation with working environment management. Total time = 1 hours</td>
<td>Handout, Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>5. Exercise and présentation on Définitions</td>
<td>The nature of OSH surveillance: Goals, Objectives, Outputs, Outcomes, Activities, Inputs. Total time = 1 hours</td>
<td>Handout, Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>6. Presentations, exercises, and discussions</td>
<td>The working environment control process: Monitoring, audits, and evaluation, working environment inspection (what to look for); Measurable indicators. Total time 3 hours</td>
<td>Handout, Pens, paper, Flipcharts, Projector</td>
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<tr>
<td>7. Presentation and discussion</td>
<td>National institutional framework for workplace inspection: • Strategic allies and partners including horizontal and vertical linkages, an articulation of their roles and necessary relations. Total time = 1 hour</td>
<td>Handout, Pens, paper, Flipcharts, Projector</td>
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</table>
8. Presentation and discussion
Overview of major working environment problems of an industry, their location causes and effects.
Total time 1 hour

9. Group discussion
Three groups on three themes of the week
Total time = 1 hour

10. Practical Exercise
CRACKERS
Workplace: Each participant participates in carrying out an inspection and writing it up. The reports are to be marked and discussed.
• Exercise brief
• Discussion and debrief of the exercise
Total time = 3 hours

6.5.2 SESSION TWO: Background and stage setting (8 hours)
Objective: To acclimatise the participants to the basic documents guiding the process of work place OSH management and in particular advocacy and inspection in the plant.

This module therefore presents the background basis for work place inspection and surveillance.

<table>
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<tbody>
<tr>
<td>1. Presentation and discussion: The Company X Occupational Safety and Health Policy</td>
<td>Overview of the policy - rationale behind the policy; elements of the policy; priorities set up in the policy. •Introduction and overview: company Goals, Objectives, strategies</td>
<td>Handout</td>
<td>Pens, paper Flipcharts Projector</td>
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</tbody>
</table>
## 2. Presentation, exercises and discussion:

- The Occupational Safety and Health Act No 9, 2006.
- The Workers Compensation Act Cap 225.
- Other labour laws.

**Overview of the Act.**
- The law and OSH management;
- Inspections and inspectors;
- Accident investigation;
- Powers of inspectors;
- Implications of the law to the enterprise;
- Prosecution procedures and related criminal laws and criminal case management;
- Regulations made under the Act;
- Standards made under the law;
- Legal search and seizure;
- Case studies.

**Other laws.**

**Total time = 1 hour.**

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## 3. Presentations, exercises, discussions:

The Company XOOccupational Safety and Health Policy

Where are we with respect to implementation of the policy? What do we need to do? Who does what?

**Total time = 1 hour.**

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<thead>
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<th>Handout</th>
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4. Presentation and discussion: the international situation - International conventions, protocols, agreements etc

Overview of the international OSH management process and the mechanics of achieving objectives. Highlights of some salient OSH conventions - ILO conventions:

- Convention No. 139 and Recommendation No. 147 (1974) Prevention and control of Occupational Hazards caused by Carcinogenic Substances;
- Convention No. 148 and Recommendation No. 156 (1977) Protection of workers against Occupational Hazards in the working environment due to Air Pollution, Noise and Vibration;
- Convention No. 161 Occupational Health Services (1965):
- Convention No. 170 and Recommendation No. 177 (1990): Safety in the use of Chemicals at work;
- Convention No 174 Prevention of Major Industrial Accidents, 1993;

Total time = 2 hours
| 5. Presentation and discussion | Overview - The scope of OSH threats and hazards in the iron and steel manufacturing plant - what they are, and their effects:  
- Ergonomic hazards.  
- Biological Hazards, including epidemics and communicable diseases.  
- Construction hazards, falling objects, lifting gear.  
- Chemicals hazards including dusts, mists, fumes, smokes, gases (oven coke gases);  
- Physical hazards, including noise, heat, magnetism, electricity, light, etc.  
- Mechanical hazards, including accidents, guarding of machinery, burns, injuries, transport accidents;  
- Major accidents including explosions;  
- General health, including first aid and medical services, and welfare;  
- Psycho-social hazards, including stress;  
- Threshold Limit Values (TLVs)  
- Case study.  
Total time = 1 hour. |

| Handout | Pens, paper Flipcharts Projector |

TRAINING MANUAL FOR LABOUR UNION WORKERS (MODULE 01).
6. Group discussion

Three groups on three themes
Total time = 3 hours

Handout

Pens, paper
Flipcharts
Projector

7. Practical: Exercise GREEN BELT

Visit to the plant - Each participant participates in appreciating the factory OSH status, carrying out an inspection and writing it up. The reports are to be marked and discussed.

• Exercise brief
• Discussion and debrief of the exercise

Total time = 3 hours

Handout

Pens, paper
Flipcharts
Projector
Transport

6.5.3 SESSION THREE: Fundamental knowledge and practice (8 Hours)

Objective: To provide basic knowledge and generate interest on salient OSH subjects: the working environment; the hazards, exposure and risks - the control measures.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Concepts and Time Required</th>
<th>Materials Provided</th>
<th>Additional Materials Needed</th>
</tr>
</thead>
</table>
| 1. Presentation, discussion and exercise: Introduction and overview of module | Overview of the most abundant and notorious hazards of the enterprise:- chemicals, noise, heat, dust, and accidents
• What they are;
• Their effects on workers and the enterprise;
• Their control measures. Total time = 3 hours | Handout | Pens, paper
Flipcharts
Projector |
2. Presentation, discussion and exercise

Overview of the management of OSH in the workplace: goals, objectives, outputs, outcomes, activities, and inputs. Focus on prevention.

The scientific basis: the relation between risk, hazards, exposure.

The factors operating and their roles:
• Personal protective equipment (their rational and scope);
• Knowledge, attitudes and practices;
• Supervision, training and standard operating procedures;
• Engineering controls;
• House keeping;
• Accident records, mortality and morbidity records;
• Prudent handling, storage and transportation;
• Workplace surveillance forms of energy (noise, heat, radiation, light, etc.);
• Medical supervision.

Total time = 2 hours

Handout

Pens, paper Flipcharts Projector
3. Presentation, discussion and exercise

<table>
<thead>
<tr>
<th>Handout</th>
<th>Pens, paper</th>
<th>Flipcharts</th>
<th>Projector</th>
</tr>
</thead>
</table>

Pollution - an overview (air, water, soil pollution) including sources - point and non point sources:
- Agricultural processes/Industrial iron and steel processes and pollution;
- Climate change, fossil fuels, and pollution leading to greenhouse gases and global warming, ozone layer depletion;
- Air pollution: the CO₂/CO, SO₂/ SO₃, and NO/NO₂, systems and acid rain;
- Heavy metals: cadmium, lead, mercury,
- Health aspects of pollution
- Pollution of the working environment;
- Pollution of the water bodies including foecal waste treatment and its effects on water bodies;
- Municipal waste handling and environmental pollution; including urban run-off, solid wastes and municipal water discharges;

Total time = 1 hour.
| 4. Presentation, discussion and exercise | Chemical safety including all aspects of recognition, evaluation and control of man-made or natural chemical hazards, objectives of chemical inspection:  
- Chemical safety information dissemination;  
- ILO Convention on chemical safety;  
- Industrial chemicals including major industries e.g. iron and steel processing;  
- Public health impact of chemicals and approaches to their prevention;  
- Chemical and biological monitoring;  
- Checklist for chemical inspection;  
- Toxicology - an overview with emphasis on environmental toxicology especially human exposure to chemicals via the environment;  
- Health effects of chemicals including dose and concentration response, human biotransformations, acute and chronic effects;  
- Exposure pathways;  
- Exposure assessment;  
- Genetic monitoring.  
Total time = 2 hours |
| | | Handout, pens, flip-charts, projector |
6.5.4 SESSION FOUR: Fundamental knowledge and practice (8 Hours)

**Objective:** To provide basic knowledge and generate interest on salient OSH subjects namely the emergency situation.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Concepts and Time Required</th>
<th>Materials Provided</th>
<th>Additional Materials Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Presentation, discussion and exercise</td>
<td>Emergency management - an overview including definition of terms, organisation and responsible institutions; • The Emergency management policy; • Emergencies and the working environment; • Emergency preparedness; • Slow onset and rapid onset disasters; • Technological disasters; • Vulnerability analysis; • Major hazard control, emergency planning; • Material safety data sheets; • Transport and storage of hazardous materials; • Early warning systems; • Case study. Total time = 4 hours</td>
<td>Handout</td>
<td>Pens, paper Flipcharts Projector</td>
</tr>
<tr>
<td>2. Presentation, discussion and exercise</td>
<td>Leadership and decision making with emphasis on crisis situations: • Ethics and attitudes; • Understanding politics and influencing OSH change;</td>
<td>Handout</td>
<td>Pens, paper Flipcharts Projector</td>
</tr>
</tbody>
</table>
### 3. Presentation and Discussion
- The role of an inspection in the development of enterprise policy, and action plans;
- Disputes and conflict resolution - conciliation, mediation, arbitration;
- The planning process and problem analysis;
- Team work and management;
- Results oriented management;
- The logical framework.

Total time = 2 hours

<table>
<thead>
<tr>
<th>3. Presentation and discussion</th>
<th>Debriefing and commissioning of the trained OSH managers</th>
<th>Handout</th>
<th>Pens, paper, Flipcharts, Projector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total time = 2 hours</td>
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</table>

### Conclusion

This programme is adequate to provide the necessary knowledge and skill to workers in order to ensure protection from dangerous effects of chemicals. Its implementation requires some funds and competent facilitators.
Pro-biodiversity Conservationists in Uganda (PROBICOU)

Ark Building, First Floor, Plot 398, Kalelwe, Gayaza Road.
(Next to Total Petrol Station)

P.O Box 34407, Kampala-Uganda.

Tel: +256-141-532676, +256-782-393912, +256-776-340666.

Website: www.probiodiversity.org
Email: probicon@yahoo.com, tumwesigyeus@yahoo.com