

Asbestos Management Plan

Objectives: To establish the required procedure for the safe removal, handling, packaging, transportation, storage, and disposal of all materials containing asbestos during project works.

Scope: It applies to all hazardous material and/or waste that contains asbestos produced during the rehabilitation/construction phase, and cross-cutting to all locations.

Legal and Policy Requirements

The contractor must comply with:

All Ukrainian national laws and regulations regarding Asbestos Containing Materials (ACM) management.

All Ukrainian national laws and regulations regarding hazardous waste management.

UNOPS ACM and hazardous waste management requirements.

Waste containing asbestos is considered hazardous waste under Ukrainian law, although no further definition is given in the national regulation.

Roles and Responsibilities

Role	Responsibility
All Project Personnel (including contractors)	<ul style="list-style-type: none">• Work in accordance with Asbestos Management Plan (AMP) requirements;• Contribute to the continuous improvement of AMP;• Report, or take action where applicable, to address unsafe acts and conditions;• (UNOPS personnel) to report incidents.
Head of Programme:	<ul style="list-style-type: none">• As Project Executive (PE), approve the AMP.

Project Manager	<ul style="list-style-type: none"> • Implement the AMP in the project; • Include AMP in the contracts issued to construction partners and that of the third-party monitoring teams; • Organise site inspections against AMP compliance; • Report asbestos related incidents; • Ensure corrective actions recommended from incident reports are applied; • Follow up on outstanding preventative and corrective actions from incident reports.
Project Team	<ul style="list-style-type: none"> • Supervise contractors and subcontractors on matters related to ACM management; • Carry out field visits to monitor AMP compliance; • Inform the Project Manager (PM) and HSSE Specialist when non-compliance is observed; • Follow up on corrective actions.
HSSE Manager/ Coordinator	<ul style="list-style-type: none"> • Ensure the AMP is communicated to, understood and applied by, all relevant stakeholders within the project environment; • Advise the Project Manager on all ACM / AMP related issues; • Manage and respond to any ACM incidents; • Ensure the implementation of corrective actions arising from ACM related incidents and HSE inspections; • Conduct field visits (spot checks) to monitor AMP compliance; • Coordinate the continuous improvement of the AMP.
Contractor's Project Manager	<ul style="list-style-type: none"> • Implement all relevant and appropriate sections of the AMP at all times; • Ensure understanding and application of the AMP across and by the workforce, including subcontractors, and reinforce the plan during daily meeting; • Ensure all subcontractors involved in ACM related activities observe and fully apply the AMP; • Inform UNOPS project team immediately of any discrepancies from the original survey or updated information; • Ensure ACM documentation is updated and correctly filled (ACM register, etc.), including receipt of transfer to the licensed disposal facility.

Standard Operating Procedure

Introduction

Damage Assessments (DA) have been completed and the reports indicated that asbestos containing materials are present in the */inputs from DA/*. Before any rehabilitation or demolishing activities the contractors must assess the building and identify if there is any asbestos or Asbestos Containing Materials (ACM). If ACM is suspected, the contractor must label the material and treat this as ACM.

If asbestos or ACM are identified the contractor must plan, prepare, and execute the work activities in compliance with in full compliance with this AMP.

Avoid exposure of workers and the community to asbestos without the use of appropriate Personal Protective Equipment (PPE).

Step 1: Contractor to conduct a Risk Assessment (RA) for the asbestos removal, handling, packaging, temporary storage and transportation.

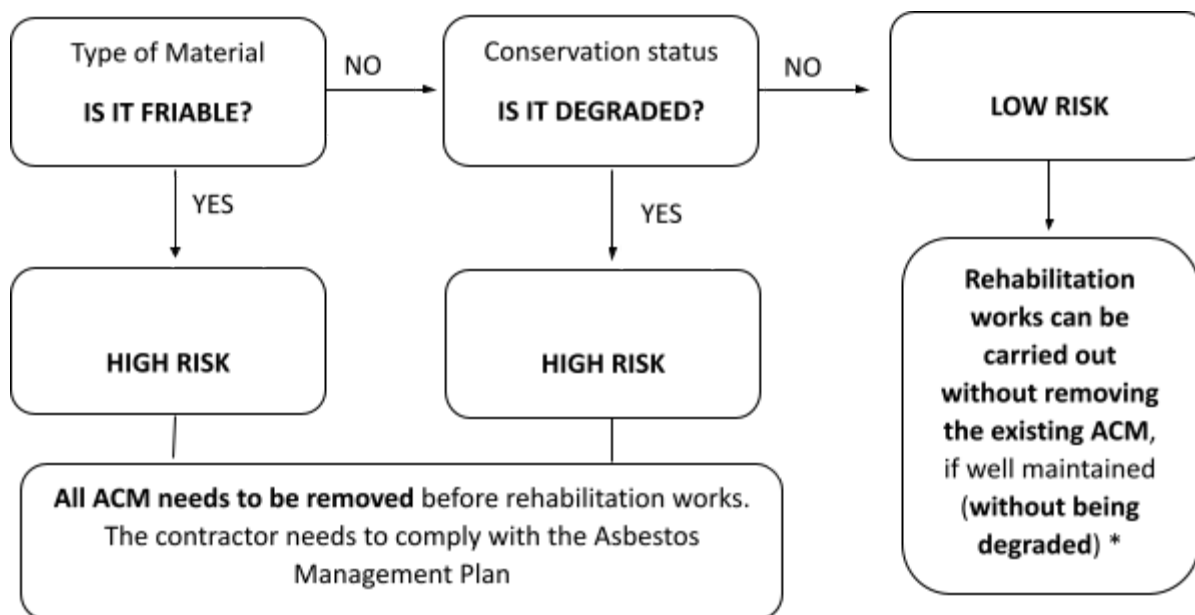
Step 2: Contractor to ensure that Permit To Work (PTW) is issued, RA or Job Safety Analysis (JSA) is discussed with the work team on the dedicated toolbox talk prior work commencement.

Step 3: All workers and supervisors directly involved in the removal and handling of ACM are to receive appropriate training from a suitably qualified and experienced trainer, and a written certificate is to be provided to the participants. The contractor must share with UNOPS the qualifications and training evidence of all personnel involved in the removal and handling of ACM.

Step 4: Contractor to keep the workplace and temporary storage location fenced and limit access only to authorised and adequately equipped personnel (see Annex I).

Step 5: Contractor to mark the work area with signs indicating the existence of ACM.

Step 6: Prior to removal, the contractor needs to assess and identify the ACM condition to confirm if it is a friable or non-friable material. Depending on findings the contractor shall act according to the risk and likelihood of releasing fibres into the air. The diagram below is a guide to the contractor's decision-making regarding removal and rehabilitation options.



* Environmental and Social Management Plan, as well as an Asbestos Management Plan is required

Step 7: All personnel that will be removing, handling, packaging, transporting, storing, and disposing of must use adequate Personal Protective Equipment (PPE) or Personal Protective Clothing, according to the risks of the respective task. PPE shall meet the asbestos-related requirements. The recommended specifications are in Annex I.

Step 8: Prior to removal of used PPE, visible asbestos shall be removed from protective clothing using an asbestos vacuum, if available, or wet wiping. PPE should be removed in the following order:

1. Disposable overshoes or washable boots.
2. Disposable coveralls.
3. Disposable gloves.
4. Safety goggles; and
5. Respirator or mask

Additional information regarding PPE:

Coveralls should be removed by taking arms out of the sleeves and rolling the sleeves inside out and then rolling the coveralls down the body. Non-disposable respirators should be thoroughly cleaned, and any contaminated filters removed for appropriate disposal. Used disposable PPE is to be placed in a sealed heavy-duty 200µm (micrometres) (minimum thickness) polythene bag. The outside of the bag should be wiped down using a damp cloth which then is to be placed inside the bag.

The bag should then be sealed with duct tape and labelled as “Asbestos Waste”. Following the removal of PPE, personnel are to thoroughly clean their face, hands, and fingernails with soapy water.

Step 9: The contractor shall provide separate work sections for dressing up before and after work and a showering facility after work.

Step 10: The removal of asbestos or ACM must follow the following process:

- Fence and control access to asbestos-containing material sites.
- Ensure any electrical sources that may become wet have been de-energised
- Carefully wet the asbestos/ACM structure and keep it wet until packaged for transport. Wet the structure with water or a wetting agent, or wrap the ACM in plastic in situ before removal. This will save water, and lower the risk of asbestos fibre release.
- Removal of ACM.
- Place the ACM on plastic-lined ground and place individually into polyethene plastic bags on site.
- Carry the materials to the designated transportation.

Prohibited tools and equipment:

A contractor or their workers must not use high-pressure water sprays or compressed air on asbestos or ACM, unless for firefighting or fire protection purposes. Other tools and equipment that generate dust such as high-speed abrasive power and pneumatic tools (e.g. angle grinders, sanders, saws and high speed drills) and brooms and brushes (unless brushes are used for sealing) must also not be used on asbestos, unless the use of the equipment is controlled. This means the equipment is enclosed when used, or the equipment is designed or used in a way that captures or suppresses airborne asbestos fibres.

Use of tools and equipment:

Tools and equipment that can be used during asbestos removal work include HEPA filtered industrial vacuum cleaners, and manually operated hand tools and equipment that have been designed to capture or suppress respirable dust, or are used in a way that is designed to capture or suppress respirable dust.

Tools and equipment that cause the release of asbestos, including power tools and brooms, must only be used on asbestos or ACM if the equipment is enclosed and/or designed to capture or suppress asbestos fibres, and/or the equipment is used in a way that is designed to capture or suppress asbestos fibres safely, for example:

- enclosing the tool or instrument

- using engineering controls such as extraction ventilation
- using the tools and instruments within an enclosed removal area (for example full enclosure or small enclosure).

Step 11: Packaging shall be done by a removal contractor. The phases below will be followed:

- Prevent breaking the ACM during packaging.
- Line the base of the transporting vehicle with polythene sheeting.
- Place the packaged ACM gently onto the vehicle.
- Completely cover packaged ACM with polythene sheeting.
- Seal with adhesive tape.
- Label as “ASBESTOS Hazardous waste. No unauthorised opening”.

Step 12: Transportation shall be done in a legal compliance with hazardous waste transportation. The transport contractor is to follow the official route, non-stop, with no diversion to any other destination or combine the consignment with other non-asbestos consignments. The following must comply:

- To transport waste, the carrier needs to be licensed under local laws.
- Use an enclosed vehicle easily cleanable and lockable.
- Line the bed of the truck with plastic sheeting, then place the plastic-wrapped ACM on that sheeting.
- Remove the ACM at the disposal point, including all plastic sheeting.
- Workers will be required to wear PPE when removing ACM and plastic sheeting.
- The driver of the carrier vessel shall hold a valid driver’s licence with a minimum of five (5) years of experience in driving.
- All transportation vehicles must ensure internal air circulation is used and windows are closed on arrival at the tip face and exiting the facility.
- The driver must follow the directions of the Site Operator.
- All personnel are to wear appropriate PPE when handling asbestos waste or if located outside of vehicles during unloading.
- ACM must be handled, unloaded, and disposed of carefully to avoid damaging packaging and generation of dust.

Step 13: Assess and decide if there is a need and an adequate solution to have a temporary storage facility. The contractor must submit for approval the proposed temporary storage facility/solution. The descriptive solution must include:

- Location (name, coordinates).
- Brief description of the surroundings.
- Material of the temporary storage.

- Storage access and security conditions.
- Health, Safety, Social and Environmental (HSSE) safeguards implemented to avoid any negative impacts.
- Provide a photographic register.
- Duration of the planned temporary storage.
- Description of the long-term solution suggested (after the temporary solution).
- Definition of roles and responsibilities regarding the management during the temporary storage and long-term solution.

Step 14: Asbestos/ACM disposal shall be at an authorised disposal landfill for hazardous waste. Landfill must provide papers of the amount of ACM received according to the Ukrainian law.

Step 15: Asbestos/ACM must be traced from removal to the disposal stage. The contractor is responsible for ensuring there is a register in place and signed at the removal stage, transportation stage and offloading for disposal. The procedure for the use of the asbestos waste register (see Annex II) is as follows:

- Contractor verifies the number and sizes of ACM removed and packaged.
- Site supervisor confirms the package and logs on to the Asbestos Waste Register in duplicate.
- The driver and the supervisor sign on the Asbestos Waste Register after completing all the details on the register.
- Driver hands over the Asbestos Waste Register to the receiving agent at the disposal site or the temporary storage facility (if applicable).
- The agent at the destination (disposal site) signs on the Asbestos Waste Register to confirm receipt of the consignment in good order.
- All parties keep one copy of the Asbestos Waste Register for audit purposes. The driver keeps a copy for evidence of the completion of the task.

In case of an unplanned event

Step 16: Any asbestos-related incident requires immediate measures from the contractor and an immediate report to UNOPS. The contractor must indicate the emergency management measures planned to be undertaken in the event of incidents with ACM occurring.

Asbestos-related incidents may include the spillage or escape of asbestos fibres or exposure to asbestos through the lack of or inappropriate PPE.

Step 17: In the event there is a release of asbestos fibres /ACM dust during handling, loading and unloading:

- Clear the area or site personnel and vehicles.
- Notify the Site Supervisor immediately.
- Trained personnel wearing appropriate asbestos PPE are to manage the load.
- All asbestos and dust are to be wet down with a fine mist.
- Rewrap or wrap the broken ACM and seal.
- Any broken parts of the packaging are to be sealed in plastic or bags. This will include the capture and sealing of any small debris on the ground.

Step 18: If a person is exposed to asbestos without the use of appropriate PPE, the following decontamination procedure must be undertaken:

- Immediately wet down the person with a fine spray/mist of water
- The person must then walk to the nearest shower facility (if not, vehicles or machinery may be contaminated).
- Gently remove all contaminated clothing and place it in a sealed bag.
- Shower to remove all dust and asbestos fibres with a particular focus on hair, face, hands, and fingernails.
- Change into clean clothing.
- The bag must be labelled "Asbestos – Hazardous Waste" and disposed of appropriately.

References

1. UK Control of Asbestos at Work Regulations 2002 No.2065
2. DIRECTIVE 2009/148/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 November 2009 on the protection of workers from the risks related to exposure to asbestos at work
3. Decree of the Cabinet of Ministers of Ukraine "On the approval of the Procedure for Issuing Permits to Perform High-Danger Works and to Operate (Use) Machines, Mechanisms, and High-Danger Equipment" No.1107, October 26, 2011
4. On the approval of the State sanitary norms and rules "On the safety and protection of workers from the harmful effects of asbestos and asbestos-containing materials", Ministry of health of Ukraine, Document z1776-12, October 1, 2012
5. GEM02 Waste Management, UNOPS
6. GEM07 Hazardous Waste Management, UNOPS

Annex

Annex I - Asbestos PPE Specifications

Annex II - Asbestos Waste Register

Annex I - Asbestos PPE Specifications

The following table summarises the PPE required to perform any work activities handling asbestos or materials containing asbestos. PPE must not be taken home. Disposable PPE must be disposed of as Asbestos waste.

ID	Objective	PPE	Specifications
1	Body protection	Full body disposable Suit with covered arms and legs	<p>The disposable suit should:</p> <ul style="list-style-type: none"> • Type 5, category 3 (prEN ISO 13982-1 Protective clothing for use against dry solid particulates) • Good breathability • Low thermal resistance • Should have zippers • Should be hooded. The hood should be worn over respirator straps. • Waterproof • Tight-fitting cuffs • Coveralls should be one size too big to avoid potential ripping at seams, fitted with a hood and cuffs. • No reusable overalls shall be used. When the task is completed, the overalls are wrapped in plastic and disposed of with the ACM.
2	Eye protection	Safety goggles	<ul style="list-style-type: none"> • Safety goggles or glasses protect your eyes from any falling or flying debris. Eyewear should be used when removing materials from overhead. • Clear lens • Adjustable elastic strap (for goggles) • Direct Ventilation • Impact goggles have a direct venting system that circulates air and helps minimise fogging, allowing for use in varied environments and conditions.

ID	Objective	PPE	Specifications
			<ul style="list-style-type: none"> • Wide opening to fit over prescription eyewear.
3	Foot protection	Disposable overshoes or washable boots	<ul style="list-style-type: none"> • Boots are preferable to disposable overshoes which cannot cause slipping risk • Boots without laces will be used as these are easiest to clean.
4	Hand and arm protection	Single-use gloves	<ul style="list-style-type: none"> • Finger-type gloves • Single-use gloves shall be used. • If latex gloves are to be used, use only “low-protein powder-free” gloves. • Superior dexterity & flexibility • Good fit & tactile sensitivity • Latex softness provides comfortability for extended use. • Chlorinated or polymer powder-free interior promotes smooth donning & doffing experience. • Textured surface provides a secure grip and added handling precision • Dispose of used gloves as asbestos waste
5	Head protection	Hard hats	<ul style="list-style-type: none"> • Tight fitting • Should be adjustable
6	Respiratory protective equipment	Particulate respirators	<ul style="list-style-type: none"> • Disposable mask or half-face respirator with the filter class not less than N-100, P-100 or R-100 (NIOSH rating) or equivalent. • Non-disposable respirators should be thoroughly cleaned, and any contaminated filters removed for appropriate disposal • People with prescription glasses must either wear modified spectacles or wear supply hoods instead.

Annex II - Asbestos Waste Register

Site Asbestos Waste Register

Project title	
Project site	
Project Manager	
Contractor's Name	
Officer responsible for environmental planning – waste management	
Name of Driver	
Vehicle Registration Number	

From data collected throughout the project duration, monitor the actual quantity of asbestos waste/asbestos-containing material (ACM) generated, calculating the difference and identifying the reasons for any variance.

The plan should be regularly reviewed, and progress recorded to evaluate performance against planned targets/assumptions.

Date	Waste Material	Source of waste	Estimated Quantity	Quantity dispatched	Dispatched by	Delivery Vehicle No.	Target Destination	Received at the destination By (Name)	Quantity Received	Receiver's Signature	Notes (mitigation/control/actions)
Total											

Hazard and Risk Assessment

Location/Project/Office	24129-001 Restoring Communities		
Details of what is being assessed (activity, functional area)	Works with Asbestos Containing Materials (ACM)		
Document prepared by (name & signature)		Reviewed and approved by (name & signature)	
Date		Date	

Revision	Date	Author	Description of main changes

Follow the guidance given in the Health and Safety handbook under the title “Hazards and their control” in order get a full understanding of the hazard identification and risk assessment process.

Consequence	Likelihood				
		Unlikely	Slightly likely	Likely	Very likely
	Negligible	1	2	3	4
	Minor	2	4	6	8
	Moderate	3	6	9	12
	Major	4	8	12	16

Step-by-Step Guidance:

Stage One: Using the matrix above to carry out an initial assessment to determine the risk rating of each hazard(s) of the activity. To calculate the risk rating of a hazard, multiply the value of its consequence with the value for likelihood (note: here the hazard should be assessed without any control measures). Make sure relevant stakeholders (e.g. local UNDSS focal points) are consulted and involved in the risk assessment.

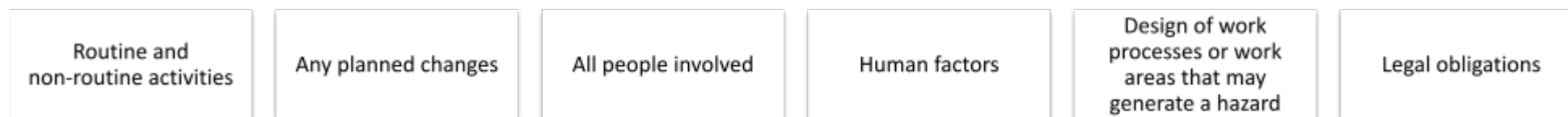
Stage Two: Use the results from the assessment in Stage One to prioritize control activities. As a general rule, if the risk is High, then the hazard must be eliminated and/or work activity prohibited or mitigation measures put in place to reduce the risk. If the risk is Medium, then additional safety controls are required to eliminate/isolate/minimise the risk. If the risk is Low, then the work can proceed with the current standard site controls in place.

The hierarchy of controls (elimination, substitution, engineering controls, administrative controls, personal protective equipment) should be applied when choosing controls, with more effective ones to be applied first. See the H&S handbook for more guidance.

Stage Three: Using the matrix to review again the hazards, this time with the safety controls proposed. If the risk rating remains Medium or High, then provide alternative or additional safety controls until the risk is assessed as Low.

Stage Four: Review the risk assessment periodically in order to take account of changes in the environment. In each revision, make sure new and modified content is easily identifiable (by text highlighting, use of a different font, use of a different font colour, and similar techniques).

When identifying hazards, consider among other things the following:



The frequency of the task and the number of people that could be potentially affected should be considered.

For the identification of hazards to be effective, a variety of sources should be investigated, as for example:



Note that more detailed assessments might be necessary for the risk assessment to evaluate the harm from exposure to chemical, biological and physical agents.

Identification and ranking of natural hazards may be done by using the country specific information found on <http://www.thinkhazard.org/>.

Note on Safety and Security: Threats directly resulting from or related to terrorism, civil unrest, armed conflicts and crime falls under the responsibility of the UN Security Management System. An assessment of these should not be included in this document.

Fire, aviation safety and road transport safety are also the responsibility of the UN Security Management System; those should not be included in the risk assessment for UNOPS office facilities.

Item	Task/Activity	Potential Hazards/Risks for each task	Risk Rating (1-16)	Hazard Control Method	Control Risk Rating (1-16)	Person to implement and monitor implementation
1	Works with ACM	Airborne fibres of asbestos due to inhalation of dust, which can cause lung and other disease, including mesothelioma and other cancers, which may appear after a lengthy latent period and cause illness and death.	8	<p>Asbestos Management Plan (AMP) is in place</p> <p>This RA is discussed with work team on a dedicated toolbox talk (TBT)</p> <p>All workers will be trained and competent in handling of asbestos contained materials (ACM)</p> <p>Workers use PPE as specified in AMP</p> <p>Disturbing of ACM must be minimised in order to avoid creating of a dust</p> <p>ACM should be moisten and kept wet until it is packed for transportation</p> <p>ACM must not be cut with angle grinder or any other machine, be broken or crushed unless further controls are implemented</p> <p>ACM must be handled with care and must not be thrown, hammered or hitted in any other way</p>	4	Site Manager/ Site Supervisor

				<p>Watchman must be in place to avoid unauthorised access to work area during the removal of ACM</p> <p>ACM will be labelled and the work area will be signed and barricaded to prevent inadvertent or unauthorised access</p> <p>Asbestos waste bags or containers to be placed through the asbestos removal work area prior to commencement of the asbestos removal work. Only unused heavy duty polyethylene bags (minimum 200µm thickness) and heavy-duty polyethylene sheeting can be used. Bags labelled for asbestos waste should not be used for any other purpose.</p> <p>Safe wrapping/bagging, transport and disposal procedures to be followed in accordance with the AMP</p>		

Space for comments

Appendix: The following is a list of possible hazards.

Physical hazards	Chemical hazards	Biological hazards	Psychosocial hazards	General environment hazards
<ul style="list-style-type: none"> o slippery or uneven ground, o working at height, o objects falling from height, o inadequate space to work, o poor ergonomics (e.g. workplace design that does not take account of human factors), o manual handling, o repetitive work, o trappings, entanglement, burns and other hazards arising from equipment, o transport hazards, either on the road or on premises/sites, while travelling or as a pedestrian (linked to the speed and external features of vehicles and the road environment), o fire and explosion (linked to the amount and nature of flammable material), o harmful energy sources such as electricity, radiation, noise or vibration (linked to the amount of energy involved), o stored energy, which can be released quickly and cause physical harm to the body (linked to the amount of energy), o frequently repeated tasks, which can lead to upper limb disorders (linked to the duration of the tasks), o unsuitable thermal environment, which can lead to hypothermia or heat stress, o violence to staff, leading to physical harm (linked to the nature of the perpetrators), o ionizing radiation (from x- or gamma-ray machines or radioactive substances), o non-ionizing radiation (e.g. light, magnetic, radio-waves) 	<p>Substances hazardous to health or safety due to:</p> <ul style="list-style-type: none"> o inhalation of vapours, gases, or particles, o contact with, or being absorbed through, the body, o ingestion, o the storage, incompatibility, or degradation of materials. 	<p>Biological agents, allergens, or pathogens (such as bacteria or viruses), that might be:</p> <ul style="list-style-type: none"> o inhaled, o transmitted via contact, including by bodily fluids (e.g. needle-stick injuries), insect bites, etc. o ingested (e.g. via contaminated food products) 	<p>Situations that can lead to negative psychosocial (including psychological) conditions, such as stress (including post-traumatic stress), anxiety, fatigue, depression, from e.g.:</p> <ul style="list-style-type: none"> o excessive workload, o lack of communication or management control, o workplace physical environment, o physical violence, o bullying or intimidation. 	<ul style="list-style-type: none"> o Environmental risks o Endemic diseases o Disease Outbreaks o Pandemics o Quality and availability of health care o Natural Disasters o Nuclear Disaster o Security conditions, Crime, Social Unrest, Political violence fall under the responsibility of the UN Security Management System

Source: OHSAS 18002:2008

In order to manage and control change, this template should be reviewed each time a change happens in the organization (e.g. in the structure, personnel, management system). The results of the risk assessment should be communicated with the staff as appropriate.