



Food and Agriculture
Organization of the
United Nations



International Plant Protection Convention
Protecting the world's plant resources from pests

INTERNATIONAL STANDARD FOR PHYTOSANITARY MEASURES 41

ISPM 41

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International movement of used vehicles, machinery and equipment

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INTERNATIONAL STANDARDS FOR
PHYTOSANITARY MEASURES

ISPM 41

**International movement of used vehicles, machinery
and equipment**

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Adoption

This standard was adopted by the Twelfth Session of the Commission on Phytosanitary Measures in April 2017.

INTRODUCTION

Scope

This standard identifies and categorizes the pest risk associated with used vehicles, machinery and equipment (VME) utilized in agriculture, forestry, horticulture, earth moving, surface mining, waste management and by the military being moved internationally and identifies appropriate phytosanitary measures.

This standard does not cover passenger and commercial transport vehicles moving under their own motive power.

References

The present standard refers to International Standards for Phytosanitary Measures (ISPMs). ISPMs are available on the International Phytosanitary Portal (IPP) at <https://www.ippc.int/core-activities/standards-setting/ispm5>.

Definitions

Definitions of phytosanitary terms used in this standard can be found in ISPM 5 (*Glossary of phytosanitary terms*).

Outline of requirements

This standard describes phytosanitary measures that may apply to used VME: cleaning and treatment, prevention from contamination, requirements for facilities and waste disposal, and verification procedures.

The standard also provides guidance to national plant protection organizations (NPPOs) working with the military on phytosanitary measures applicable to the international deployment of used military VME.

BACKGROUND

Used VME are frequently traded or otherwise moved between countries. They may have been used in agriculture and forestry, as well as for construction, industrial purposes, mining and waste management. They can also be used military VME that have been subject to international deployment. Depending on their use, storage or transportation before export, used VME may have become contaminated with quarantine pests or regulated articles. When moved internationally as either a traded commodity or an operational relocation (e.g. in the case of harvesters) used VME may carry soil, pests, plant debris or seeds, and they may therefore present a pest risk to the country of destination. Depending on their use in the country of destination, they may introduce quarantine pests to agricultural, forested, wilderness or other areas.

New VME may also be contaminated but they are not covered by this standard. However, this does not exclude the option that NPPOs of importing countries may require phytosanitary import requirements for new vehicles to prevent contamination, similar to those identified in section 2.2., if technically justified.

Examples of pests that may contaminate used VME are provided in Appendix 1.

Specific guidance is needed for NPPOs regarding the pest risk associated with the movement and storage of used VME and the phytosanitary measures that may be required in order to facilitate their safe movement. The phytosanitary measures may be applied with the aim of minimizing their negative effect on trade.

IMPACT ON BIODIVERSITY AND THE ENVIRONMENT

The decontamination of used VME may provide a means to prevent the entry of organisms into new areas that could be relevant to the biodiversity of those areas (invasive alien species).

REQUIREMENTS

1. Pest Risk

The main pest risk associated with used VME is contamination with soil, pests, plant debris, and seeds and other plant parts capable of propagation. Seeds and other plant parts capable of propagation may be of concern because the plant itself can be a pest or potentially harbour pests. Pests that have a resistant or dormant life stage allowing them to survive transport to endangered areas are a particular concern.

The pest risk from contamination of used VME is difficult to assess. Therefore, the normal process of undertaking pest risk analysis to determine if phytosanitary measures are necessary, and the strength of such measures, may not be possible. For this reason, in order to reduce the risk of introduction and spread of quarantine pests used VME moved internationally should be free from contamination in accordance with this standard.

1.1 Elements of pest risk categorization

The following elements of used VME may affect the level of pest risk:

- distance of movement: used VME moving on their own motive power over short distances across borders to be used immediately may pose a low pest risk
- type: used VME with more complex structure have more areas that may be contaminated
- origin and prior use: VME used on farms, in crop fields, in forests, in close proximity to vegetation or for transporting organic material are more likely to be contaminated
- storage: used VME stored outdoors and in close proximity to vegetation or lights that attract insects are more likely to be contaminated
- intended location or use: used VME that will be used in agricultural areas, in forests or in close proximity to vegetation are more likely to provide a pathway for the introduction of pests.

In the case of used military VME, exposure to kinetic forces and rigours of combat operations may result in external damage and internal penetration of contamination.

Examples of used VME, ranked in order of decreasing pest risk, together with examples of possible phytosanitary measures and verification procedures, are provided in Appendix 2.

2. Phytosanitary Measures

Used VME moved internationally should be free from contamination.

The main groups of phytosanitary measures that may be applied to used VME are described in the sections below.

NPPOs are encouraged to work with military authorities to develop procedures consistent with the guidance on the international movement of used military VME provided in Annex 1.

2.1 Cleaning and treatment

Some of the cleaning methods are:

- emptying water reservoirs
- removing debris or filters
- abrasive blasting
- pressure washing
- steam cleaning
- sweeping and vacuuming
- compressed air cleaning.

Treatments that may be used in addition to cleaning are:

- chemical treatment (e.g. fumigation, disinfestation)
- temperature treatment.

Partial or full dismantling of the used VME may be necessary for effective cleaning or treatment. It may be necessary to clean or treat the used VME while they are in operation to ensure that all moving parts can be accessed (e.g. agricultural equipment with moving parts such as conveyors or rollers).

2.2 Prevention of contamination

Where clean VME are moved to a storage area, packing area or port of loading or when they are transiting through another country, phytosanitary measures may be taken to prevent contamination. These include, as appropriate:

- storage in appropriate areas with reduced risk from contamination
- storage and handling on surfaces that prevent contact with soil
- keeping vegetation around storage areas, packing areas or ports of loading short by mowing or using weed control in order to reduce the risk of contamination by airborne seeds and other pests; consideration may be given to the erection of barriers to limit seed movement around storage and loading areas.

During seasonal pest emergence periods or occasional pest outbreaks, special consideration may be given to phytosanitary measures that prevent pests being attracted to storage and loading areas (e.g. restricting the use of artificial lights during night-time operations).

2.3 Facilities and waste disposal requirements

The type of equipment and nature of facilities necessary for cleaning and treatment of used VME depend on where these procedures take place. Inspection, cleaning and treatment will normally take place in the exporting country to fulfil the phytosanitary import requirements of the country of destination. Facilities in the exporting country may not need elaborate solid waste and wastewater management systems as the contamination may be of local origin.

Facilities required for the inspection, cleaning and treatment of used VME may include:

- surfaces that prevent contact with soil, including soil traps and wastewater management systems
- temperature treatment facilities
- fumigation or chemical treatment facilities.

Disposal of soil and contaminated washing water should be in accordance with national or local regulations.

Containment and disposal methods should be sufficient to prevent the spread of pests and may include: soil traps, bagging, deep burial, incineration, fumigation, chemical treatment, composting and wastewater management systems.

3. Verification Procedures

Requirements for documentation to attest that consignments have been cleaned, treated or inspected (e.g. cleaning declaration, treatment certificate, inspection declaration, phytosanitary certificate) should be determined by the NPPO of the country of destination, and should be proportionate to the identified pest risk and appropriate for the phytosanitary measures required.

An NPPO of a country of destination may conduct import inspections to verify that used VME are clean. Import inspections may include partial or full dismantling of used VME, and in some cases, collection of specimens for identification. Verification of cleanliness may also involve probing and flushing hidden areas (e.g. by using water under high pressure or compressed air).

The NPPO of the exporting country may authorize entities for the treatment of used VME. The cleaning of used VME may also be conducted by entities other than the NPPO.

The cleaning of used military VME may be performed and verified by military personnel when requested by the NPPO or in conformance with an agreement between the NPPO and military authorities.

4. Non-compliance and Phytosanitary Actions

Where non-compliance occurs, the NPPO of the country of destination may take phytosanitary action as outlined in ISPM 20 (*Guidelines for a phytosanitary import regulatory system*) and should notify the exporting country (ISPM 13 (*Guidelines for the notification of non-compliance and emergency action*)).

Examples of phytosanitary actions that may be taken are detention, cleaning, treatment or reshipment of the used VME found to be contaminated. Where contaminated used VME need to be transported to another location for cleaning and treatment, the NPPO should ensure that contamination is suitably contained (e.g. by containerization), in accordance with national or local regulations.

This annex is a prescriptive part of the standard.

ANNEX 1: Guidance on the international movement of used military vehicles, machinery and equipment

1. Background

The international movement of used military vehicles, machinery and equipment (VME) may present a risk for the introduction of pests with soil, pests, plant debris and seeds to the countries of both deployment and redeployment. Examples of pests that may contaminate used military VME are provided in Appendix 1 of this standard. Movements of used military VME occur continually around the world and encompass many different conveyances and cargo storage conditions.

The international movement of used military VME may present a practical problem to national plant protection organizations (NPPOs). In many countries, NPPOs have no or limited access to the military because of security issues. For this reason, the approach taken in managing the pest risk related to the commercial and private shipping of used VME may not be applicable to the military. Consequently, military authorities are encouraged to commit to using this guidance.

2. Objective

The objective of this guidance is that used military VME are clean of soil, pests, plant debris and seeds before they are moved internationally (e.g. for training, missions and deployment).

3. Guidance

Military authorities should ensure that used VME are cleaned according to the phytosanitary import requirements developed by the NPPO of the country of destination. Cleaning methods may consist of, for example:

- emptying water reservoirs
- removing debris or filters
- abrasive blasting
- pressure washing
- steam cleaning
- sweeping and vacuuming
- compressed air cleaning.

These cleaning methods may need to be carried out in combination with partial or full dismantling of the used VME to ensure they are cleaned to a high standard. For specialized military VME, military authorities are encouraged to develop specific procedures and manuals.

Additional treatments may be required, such as:

- chemical treatment (e.g. fumigation, disinfestation)
- temperature treatment.

Wood packaging material associated with used military VME should be compliant with ISPM 15 (*Regulation of wood packaging material in international trade*).

Military authorities are encouraged to liaise with the NPPOs in their home country. Military authorities are also encouraged to liaise with the NPPO in the country of deployment, where practical. Contact information for NPPOs is available on the IPP (<https://www.ippc.int>).

Military authorities are encouraged to implement verification procedures to ensure the appropriate cleaning and treatment for used military VME has been carried out before deployment.

This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 1: Examples of pests that may contaminate used vehicles, machinery and equipment

- *Achatina fulica*, as aestivating adults
- *Beet necrotic yellow vein virus*, transmitted through soil via spores of its vector *Polymyxa betae*
- *Chromolaena odorata*, as seeds or in soil
- *Clavibacter michiganensis* subsp. *sepedonicus*, in plant residues
- *Coptotermes formosanus*, in wood and soil
- *Fusarium guttiforme*, in soil and host plant residues
- *Fusarium oxysporum*, in soil and host plant residues
- *Globodera* spp., in soil and host plant residues
- *Halyomorpha halys*, as overwintering adults
- *Lymantria dispar*, as diapausing egg masses
- *Miconia calvescens*, as seeds in soil
- *Orgyia thyellina*, as diapausing pupae
- *Phytophthora ramorum*, in soil
- *Solenopsis invicta*, as eggs, larvae and adults, and nests
- *Sorghum halepense*, as rhizomes and seeds
- *Tilletia indica*, as spores in soil and on wheat seed residues

This appendix is for reference purposes only and is not a prescriptive part of the standard.

APPENDIX 2: Examples of used vehicles, machinery and equipment, ranked in order of decreasing pest risk, together with examples of possible phytosanitary measures and verification procedures

Category	Contamination notes	Phytosanitary measures	Verification procedures
<p>Agricultural, forestry and horticultural used VME, such as:</p> <ul style="list-style-type: none"> - harvesters - sawmill machinery - logging trucks - animal transport vehicles - compost and manure trailers - tractors - tools. <p>Reconditioned or field-tested used VME are included.</p> <p>This category is usually considered to be high pest risk.</p>	<p>Contaminants:</p> <ul style="list-style-type: none"> - soil - pests - plant debris - seeds 	<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p> <p>Sweeping and vacuuming</p> <p>Compressed air cleaning</p> <p>Chemical treatment (e.g. fumigation, disinfestation)</p> <p>Temperature treatment</p>	<p>Cleaning declaration</p> <p>Treatment certificate</p> <p>Inspection (may include dismantling and testing)</p> <p>Phytosanitary certificate</p> <p>Authorization and audit</p>
<p>Earth moving used VME, such as:</p> <ul style="list-style-type: none"> - bulldozers - graders - surface mining equipment. <p>Reconditioned or field-tested used VME are included.</p> <p>Pest risk is variable, but high levels of contamination may occur in this category.</p>	<p>Soil is the main contaminant; pests, plant debris and seeds can also be contaminants</p>	<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p> <p>Sweeping and vacuuming</p> <p>Compressed air cleaning</p> <p>Chemical treatment (e.g. fumigation, disinfestation)</p>	<p>Cleaning declaration</p> <p>Treatment certificate</p> <p>Inspection (may include dismantling and testing)</p> <p>Phytosanitary certificate</p> <p>Authorization and audit</p>
<p>Used military VME, such as:</p> <ul style="list-style-type: none"> - trucks - tanks - personnel carriers - rolling stock. <p>Pest risk is variable, but used military VME are often used off-road and stored outdoors, leading to a higher risk.</p>	<p>Contaminants:</p> <ul style="list-style-type: none"> - soil - pests - plant debris - seeds 	<p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p> <p>Compressed air cleaning</p> <p>Chemical treatment (e.g. fumigation, disinfestation)</p>	<p>(See Annex 1 of this standard)</p>
<p>Waste management used VME, such as:</p> <ul style="list-style-type: none"> - rubbish/garbage/waste trucks - waste sorting equipment. <p>Reconditioned used VME are included.</p> <p>Bulldozers used in landfills</p>	<p>Organic waste debris is the main contaminant, including:</p> <ul style="list-style-type: none"> - soil - pests - plant debris 	<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p> <p>Sweeping and vacuuming</p> <p>Chemical treatment (e.g. fumigation, disinfestation)</p>	<p>Cleaning declaration</p> <p>Treatment certificate</p> <p>Inspection (may include dismantling and testing)</p> <p>Phytosanitary certificate</p> <p>Authorization and audit</p>

Category	Contamination notes	Phytosanitary measures	Verification procedures
are considered under earth moving VME.			
<p>Deep mining used VME.</p> <p>The most likely contaminants are soil and to a lesser extent pests. Pest risk is generally low unless used VME are contaminated with surface soil. It can be difficult to determine the prior use and whether or not used VME were used for surface mining.</p>		<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p>	<p>Cleaning declaration</p> <p>Inspection (may include dismantling and testing)</p>
<p>Used industrial VME used outdoors, such as:</p> <ul style="list-style-type: none"> - cranes - forklifts. <p>Pest risk is variable, but generally low unless used VME are used in close proximity to vegetation or are contaminated with soil.</p>		<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p>	<p>Cleaning declaration</p> <p>Inspection</p>
<p>Used vehicles, such as:</p> <ul style="list-style-type: none"> - cars, vans, trucks, buses - off-road vehicles (e.g. motorbikes, quad bikes, four-wheel drives) - locomotives and engines - used parts - trailers - attached tyres. <p>Extremely variable pest risk, with some used vehicles at higher risk but many at low risk. This category has a large volume of used, traded vehicles.</p>	<p>Contaminants:</p> <ul style="list-style-type: none"> - soil - pests - plant debris - seeds 	<p>Abrasive blasting</p> <p>Emptying open water reservoirs, removing debris</p> <p>Pressure washing</p> <p>Steam cleaning</p> <p>Sweeping and vacuuming</p> <p>Chemical treatment (e.g. fumigation, disinfestation)</p> <p>Temperature treatment</p>	<p>Cleaning declaration</p> <p>Treatment certificate</p> <p>Inspection (may include dismantling and testing)</p>

VME, vehicles, machinery and equipment.

IPPC

The International Plant Protection Convention (IPPC) is an international plant health agreement that aims to protect cultivated and wild plants by preventing the introduction and spread of pests. International travel and trade are greater than ever before. As people and commodities move around the world, organisms that present risks to plants travel with them.

Organization

- ◆ There are over 180 contracting parties to the IPPC.
- ◆ Each contracting party has a national plant protection organization (NPPO) and an Official IPPC contact point.
- ◆ Nine regional plant protection organizations (RPPOs) work to facilitate the implementation of the IPPC in countries.
- ◆ IPPC liaises with relevant international organizations to help build regional and national capacities.
- ◆ The Secretariat is provided by the Food and Agriculture Organization of the United Nations (FAO).

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