

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the Globally
Harmonized System of Classification
and Labelling of Chemicals

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IMPLEMENTATION OF THE GHS

FAO's past and present activities

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Introduction

The adoption of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) can be considered a major achievement in providing international guidance on and standardization of the classification of chemicals, their labelling and safety data sheets (SDS). One of FAO's main responsibilities in implementing the GHS is in the field of pesticides.

Pesticides are chemicals, many of which are intrinsically hazardous to man and the environment. Contrary to most other groups of chemicals covered by the GHS, pesticides are intentionally emitted into the environment, generally to control plant and animal pests or diseases, weeds, or vectors of human or animal diseases. For this reason, the objective of classification and labelling of pesticides goes beyond the communication of hazards; it also comprises concrete recommendations on product handling, use and risk mitigation.

The worldwide guidance document for the sound management of pesticides is the *International Code of Conduct on the Distribution and Use of Pesticides*. The Code of Conduct has served as the globally accepted standard for pesticide management since its inception in 1985; its most recent revision dates from 2002, which has been adopted by governments, the pesticide industry and NGOs.

The importance of proper and effective classification and labelling of pesticides, as well hazard communication and training of users and the public, is fundamental for sound pesticide management practice, and reference to these issues is made in numerous articles of the Code of Conduct. With the adoption of the GHS, a new UN standard has been set with respect to classification and hazard communication of chemicals, which is also applicable to pesticides. FAO is therefore in the process of integrating the principles of the GHS into its guidelines for pesticide evaluation, registration and labelling and into other documents, where appropriate.

Pesticide evaluation and registration

The authorization or registration of pesticides is the most important option for governments to regulate the import, distribution and use of a pesticide. The registration process comprises the evaluation of the pesticide itself in relation to its chemical properties, of the data on biological efficacy of the product, its agronomic sustainability, as well as its occupational, consumer and environmental risks.

Data evaluation relevant to human health and the environment generally contains both hazard- and risk-based elements. However, its ultimate objective is to assess the risks of a product under local environmental and exposure conditions. In this respect, the Code of Conduct explicitly requests governments to *conduct risk evaluations and make risk management decisions based on all available data or information as part of the registration process* (article 6.1.3).

While pesticide registration based on risk assessment is the recommended approach, this is recognized as being a resource-intensive activity requiring a considerable number of well-trained staff and locally relevant data on pesticide use practices and levels of exposure. In countries where resources are limited, hazard assessments still tend to play an important role in decision-making for pesticide registration, at least until an appropriate risk assessment is feasible. The GHS provides a globally harmonized basis for hazard classification and FAO expects it to play an important role in the pesticide registration process.

FAO intends to incorporate the GHS hazard classification system into its pesticide registration guidelines, which are currently being revised. The exact manner in which this will be done has not yet been established and will be discussed in forthcoming meetings of the FAO Pesticide Management Expert Panel.

Labelling

Pesticide labels are a very important, and sometimes the only, means of communication between the manufacturer or supplier of a pesticide and its user. The purpose of pesticide labelling is to provide both use recommendations on the product as well as information regarding hazards and handling, to ensure that the product is used effectively and with minimum risk. As a result, pesticide labels tend to be much more detailed than general chemicals' labels. Also, the pesticide label is the outcome of the assessment carried out during the national registration process and is normally a legally binding document.

Historically, the form and contents of pesticide labels have been standardized to a high degree and the basic information that is provided on a label tends to show a great deal of similarity globally. This is the result of past efforts by governments, pesticide manufacturers and international organizations such as FAO and WHO to develop both comprehensive and comprehensible labels.

FAO first published its *Guidelines on Good Labelling Practice for Pesticides* in 1985 and revised them in 1995 to incorporate the field tested pictograms. These guidelines are intended for those involved in the preparation of labels as well as regulators responsible for their approval.

To improve the understanding of the pesticide label, particularly by users who have limited reading ability, FAO and the pesticide manufacturers association GIFAP¹ in the mid-1980s developed pictograms specific to pesticide use. The pictograms were field-tested in all major regions of the world to ensure that they would be understood across cultures and languages by all users. This resulted in a set of pictograms clarifying pesticide application and risk reduction measures which have subsequently been accepted worldwide and are very widely used on pesticide labels. In addition, colour coding based on the WHO Recommended Classification of Pesticides by Hazard was adopted

¹ GIFAP has now been superseded by CropLife International.

on the labels to further strengthen hazard communication. FAO underlines the importance of globally harmonized pesticide labels which can be understood even by illiterate pesticide users and will continue to promote such harmonization.

The information required on a GHS label is basically a subset of the information that FAO and the pesticide industry recommend should appear on a pesticide label. As such, GHS requirements are not expected to change the content of the label. Some of the GHS signal words, hazard statements and pictograms are different from what is presently practised in pesticide labelling, and some modifications will need to be introduced. FAO does not see fundamental impediments for such changes to be made, provided that they are properly locally tested for comprehensibility and are accompanied by effective information and awareness building activities. However, certain classification changes will occur, e.g. as GHS is classifying the final product including the adjuvant, inerts, other by-products and the active ingredient. It remains unclear to FAO what mechanisms exist to ensure consistent classification of pesticides when the data are evaluated by different authorities in different countries

Another issue that will require further study is the use of hazard-based *versus* risk-based labelling. As was mentioned above, risk assessment is a central tenet of pesticide registration. The GHS recognizes that risk-based assessments can be the basis for classification and labelling, in particular for chronic health hazards. However, GHS stipulates that labelling of acute health effects, environmental and physical hazards should be hazard-based (see Annex 5 to the GHS).

This approach corresponds to a large extent to actual pesticide labelling where both acute toxicity and physical hazards are already labelled after a hazard-based assessment (e.g. using the WHO Recommended Classification of Pesticides by Hazard). Also, many of the pictograms currently used tend to be hazard- rather than risk-based.

However, contrary to the GHS, environmental warnings and risk mitigation measures on the label tend to be based on risk assessments of the recommended use of the pesticide under local conditions. This is because, as indicated above, pesticides are explicitly emitted into the environment and environmental hazard assessments are generally considered to be too limited in scope by regulators. How to reconcile the principles of the GHS in this field with the long-standing practices of pesticide regulators will therefore need further discussion.

FAO is at present in the process of updating its pesticide labelling guidelines. As part of this exercise, a questionnaire will be sent to its Members to assess the extent to which the GHS is already being applied to pesticide labelling and what legal, as well as administrative, changes have been made. The results of this assessment will contribute to the revision of the FAO labelling guidelines, under the supervision of the FAO Expert Panel on Pesticide Management.

Conclusion

FAO stresses the importance of a single globally harmonized pesticide labelling system, to ensure understanding of pesticide labels even across borders as pesticides are traded the world over. Essential information on the label, with respect to pesticide use and handling as well as to pesticide hazards and risks, should therefore be available both as text and pictograms and/or colour coding. The existing widely tested and used pesticide label pictograms should therefore continue to be used, in addition to the GHS pictograms.

The adoption and implementation of the GHS provide important opportunities to further strengthen and harmonize pesticide classification and labelling. It also highlights the importance of, and difficulties with respect to, effective hazard communication of chemicals. The flexibility given by GHS for national authorities through the “building block approach” and through self-assessment may lead to different classifications and labelling in different countries which should be avoided.

Experience gained by FAO and other stakeholders in testing and improving the comprehensibility of pesticide labels, as well as the development of specific use and warning pictograms for pesticides, has shown the great importance of effective labelling as a means to provide use recommendations and hazard information. FAO therefore welcomes the comprehension testing methodology of labels and SDSs provided as Annex 6 to the GHS. FAO stresses the importance of continuing to field-test the understanding of farmers and other pesticide users of pesticide labels, and in particular of the new elements and pictograms which have been developed under the GHS.

Awareness building and training of regulators, pesticide manufacturers and distributors, and pesticide users on the GHS will in the near future remain essential for the effective implementation of this hazard communication system. In addition, mechanisms should be established to ensure that internationally consistent and harmonized labelling and classification of pesticide containers are maintained.

In conclusion, FAO will promote the implementation of the GHS in the field of pesticides through three major activities:

- The integration of the hazard classification principles of the GHS into the next revision of the *FAO Guidelines on Pesticide Registration*.
- The integration of the labelling principles of the GHS into the next revision of the *FAO Guidelines on Good Labelling Practice for Pesticides*.
- Awareness building and training of pesticide regulators, pesticide manufacturers and distributors, and pesticide users on the GHS, through FAO pesticide management programmes and in cooperation with others.

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