

Pesticide Discussion Forum Summary Digest

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E-Labeling and Pesticides

This document is a summary of the University of Cape Town's Division of Environmental Health's Pesticide Community of Practice held on the 25th of November 2021 entitled: "E-Labeling and Pesticides". This digest presents the issues and points raised, and the information shared by participants in response to the three questions prepared by the presenters, Maristella Rubbiani (European Commission) and Fleur van Oostroom Brummel (European Commission). A total of 58 participants joined the live discussion and 2 people blogged their responses. From the members who attended, 63% were from Africa, 18% were from Europe, 4% were from Eastern Mediterranean, 4% were from South America and 11% were from Latin America and the Caribbean.

About the Presenter



Maristella Rubbiani is currently a policy officer at the European Commission, DG SANTE, Unit E4 (pesticides and biocides). Her educational background is in Biology, and she holds a PhD in industrial and environmental hygiene. She is an experienced scientist with a demonstrated history of working in regulatory human health and environmental toxicology of chemicals. Maristella is skilled in Plant protection products and Biocides, Good Laboratory Practice, Risk Assessment & Risk management, GHS/CLP Regulations. She is a member of several international committees and fora, and formerly a member of the FAO Panel on Pesticide Management.



Fleur van Oostroom Brummel is currently a policy officer at the European Commission, DG GROW, Unit F2 (Bioeconomy, Chemicals and Cosmetics). Her educational background is in economics and international relations, and she holds a master's degree in globalisation. Fleur's experience is in both the private and public sectors in a range of areas of global issues, including waste management. Currently, she coordinates and leads work on an initiative that looks at possible digital labelling of chemical products (labelled under the CLP, Detergents or Fertilising Products Regulation).

DISCLAIMER: The information below represents the opinions of members participating from different countries expressed during the discussion and shall not necessarily be taken to reflect the official opinion of the DEH, UCT, EC, SIDA or KemI.

PRESENTED BELOW ARE THE THREE QUESTIONS AND RESULTING DISCUSSION INPUTS FROM PARTICIPANTS:

Question 1: In your opinion, would the simplification of pesticide labelling requirements improve the communication of hazard and safety information, as well as the information about use instructions to users? Explain why or why not.

GOVERNMENT SECTOR RESPONSES

AFRICA:

Kenya

- The simplification of pesticide labels will play a role in making information understandable for people with reading and writing barriers.
 - Using the GHS system should enhance safety and security.
 - The pesticide label is the only interface between the manufacturer/regulator and the end-user.
- YES
- Information on who should not handle pesticides should be included on the pesticide label.

Malawi:

- Simplification would benefit farmers who find information on pesticide labels overwhelming and difficult to read. However, the design should not take away important content but should rather make the information palatable and easy to grasp.

South Africa:

- Risk communication can be improved by words being placed adjacent to pictograms to explain the effects when using the product. Most hazard information can be communicated this way and more people can be reached.

- In comparison to the WHO toxicity colour codes, the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) will improve pesticide labels as pictograms are easier to understand.
- Toxic co-formulants should be indicated on the labels.
- Poison centres contact numbers should be included.

LATIN AMERICA AND CARIBBEAN:

Trinidad and Tobago

- Simpler labels will be desired by the end-user.

SOMEWHAT

AFRICA:

South Africa

- Though pesticide labels must be simplified, comprehensive information is necessary to direct users who do not have in-depth information on the risks of pesticide use.
- Labels must always have the GHS pictograms.

Zambia

- Enforcement on the safety of pesticides is needed.
- Policy-developers should involve traditional leaders to get community buy-in.

Zimbabwe

- Simplifying the label requirements can either enhance or compromise risk communication. Though simplification can make it easy for end-users to interpret precautionary information, insufficient information can lead to miscommunication.

NO

AFRICA:

South Africa:

- Currently, information on pesticide labels is insufficient for semi-literate people and pictograms are not fully understandable.
- Language on pesticide labels is not the language used by the majority in the country (there are 11 official languages).
- Red/green colour blindness can result in the end-users not knowing the risk of the pesticide.

INTERGOVERNMENTAL SECTOR RESPONSES

NO

EUROPE:

Switzerland

- The expectation of making pesticide use safe for low literacy groups through a smaller label is not realistic.
- Simplifying the label is not entirely a practicable requirement for smallholder farmers.

PRIVATE SECTOR RESPONSES

YES

AFRICA:

Egypt

- More visual information will make it easier for applicators who have literacy barriers.
- Smart labels can reduce illegal packaging.

SOMEWHAT

AFRICA:

Kenya

- Having aspects of the label in a local language will help improve risk communication and understanding among users.
- While simplifying labels is important, comprehension and interpretation of pictograms remain a challenge for many users, including those who have higher educational levels.
- Information on inert ingredients should also be included on the label.

Zambia

- More enforcement on the safety of the pesticides is needed, and we need the policy to involve the traditional leaders to encourage community buy-in.
- The warning on the label must disclose the effect concerning children.

ACADEMIA SECTOR RESPONSES

YES	<p>AFRICA:</p> <p>Iran:</p> <ul style="list-style-type: none"> ➤ The best way to do this is by following 2-3 letter sizes: 1 - 3 very big words to alert the user for dangers while keeping the other necessary texts on pesticide labels. ➤ Pesticide labels and labelling is important and must be considered carefully before changes are made. Therefore, instead of doing these kinds of changes better to help enforcement issues in low to middle-income countries (LMICs).
	<p>Malawi</p> <ul style="list-style-type: none"> ➤ The simplification of pesticide labelling requirements would greatly improve communication of hazard and safety information, as well as information about use instructions to users. ➤ When information is in the simplified form it is easy for Malawian local farmers most with little education to understand the use and hazard messages portrayed on the labels. ➤ Where information is not simplified handling and application of pesticides can be done incorrectly and which lead to adverse effects on human health and the environment.
	<p>South Africa:</p> <ul style="list-style-type: none"> ➤ Simplification would encourage the label's readability. ➤ As labels are legally binding, the information must be understood. ➤ Extensive research exists showing that the meaning of pictograms is not fully understood if end-users (i.e., farmers) have not been trained on it. In addition, pictograms are not intuitively obvious irrespective of people's educational level.

SOMEWHAT	<p>AFRICA:</p> <p>Mauritania</p> <ul style="list-style-type: none"> ➤ Pictograms are a good and practical way to communicate danger, however, more work should be done to facilitate end-users understanding the meaning thereof.
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NO	<p>AFRICA:</p> <p>Ethiopia</p> <ul style="list-style-type: none"> ➤ Nothing on pesticide labels should be removed, but rather maximum residue levels (MRLs) in connection to crop pest combination and water volume should be added. ➤ If the label is simplified more information should be incorporated in the leaflet. <p>South Africa:</p> <ul style="list-style-type: none"> ➤ All information on pesticide labels should be included because many people have no alternative ways to access the information that will be removed.
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Question 2: In your opinion, would the introduction of pesticide e-labelling in your country improve and increase the distribution of information? Explain why or why not.

PARTICIPANT'S RESPONSES:

AFRICA:

ETHIOPIA

- As approximately 85% of farmers cannot use e-labelling systems, it may be hard to distribute information widely.

KENYA

- E-labelling would be more useful for people who can read and write than people who have literacy barriers.
- E-labelling can help by providing information for treating pesticide poisonings.
- E-labelling cannot replace the current label system as not everyone can be comfortable with it or access the e-label.
- If there is a way in which QR codes could be integrated with SMS codes, it can help improve access to label information especially among people with limited access to technology (e.g., smartphone).
- As QR Codes are used for other products, it is a good starting point for pesticide labels.

MALAWI

- To regulators, it is a great tool, but for end-users, accessing technology could be a challenge.
- Providing information on pesticide products through digital gadgets promotes data-sharing between manufacturers, regulators, and consumers. The challenge with this system is that it is not easily accessible to all people.
- Most people lack e-skills and therefore a challenge is using various services provided through digital technologies.

MAURITANIA

- Yes, but not significantly because of limited access to technology.

NIGERIA

- The QR code should be an additional feature and not a direct substitute for the physical label. A large percentage

of pesticide users in LMICs have limited access to the internet and may not fully understand how a QR code works.

SOUTH AFRICA

- Many people in the country have cell phones and could access information through QR codes. However, not all areas have internet signal strength, and the agriculture sector still has high numbers of people who are struggling to use technology and read. This technology must be used in conjunction with the traditional labels and safety data sheets.
- Many people who reside in rural areas do not have access to enablers such as smartphones for immediate access to pesticide information through QR codes.
- As an additional link for those that prefer accessing information electronically, QR codes could improve distribution.
- Digital information can be a means to communicate information vocally and benefit people with reading barriers.
- A QR code could be a solution to having access to information in the various 11 languages.
- Many retailers or teachers have access to technology and can share the information in a community meeting as most people use the same pesticides.

TANZANIA

- Yes, in Tanzania with the increased growth of the use of digital platforms and the internet, the introduction of e-labelling would be used and is easy to access. However, for small-scale farmers or users, it remains a challenge.
- Communication that could be vocally done through the QR codes could be beneficial.
- QR codes is a familiar tool as it has been used for other products.

UGANDA

- E-labelling is only beneficial to people who have access to technology and the internet.

ZAMBIA

- Health personnel could find QR codes to be a very useful tool.

EUROPE:

SWEDEN

- It is important to consider what information is essential to end- users but not essential for their protection. An e-label cannot replace a label, but it is a good way to use digital means to provide additional information.
- Digital information can allow vocal communication.
- Digital platforms can provide information in more languages than on the label.
- For digital labelling to be effective, pilots are necessary.

MIDDLE EAST:

IRAN

- As a global system for pesticide regulation is being considered, e-labelling can be beneficial.
- Biocidal regulations are more comprehensive.

LATIN AMERICA AND CARIBBEAN:

TRINIDAD AND TOBAGO

- A lot of information is required to enhance the effectiveness, efficiency, and safety of pesticide use. If QR codes are used, then the label can be solely for health and environmental safety information.

JAMAICA

- E-labelling would help health professionals and researchers to access information, however, it might not be regularly used by end-users.
- A picture is a better tool for persons who cannot read, and audio is a good option for disabled persons.

SOUTH AMERICA:

DOMINICAN REPUBLIC

- E-labelling would only be feasible for parts of the country that has a good internet system.
- The labelling regulation of my country says that all products that enter the country must have the label in Spanish.
- Access to an electronic device and the internet system in rural areas.

Question 3: What are the main benefits and the main challenges of providing pesticide product information via digital means? In your view, could digital labelling improve cost-effectiveness, productivity, and efficiency for pesticides?

REGION	BENEFITS
AFRICA	Malawi <ul style="list-style-type: none"> ➤ The main benefit of providing pesticide product information through digital gadgets is that it easily connects business entities and facilitates data-sharing among manufacturers, regulators, and consumers. ➤ Digital platforms are positive milestones that can achieve efficiency, improve cost-effectiveness, and provide enhanced and expanded pesticide information.
	Nigeria <ul style="list-style-type: none"> ➤ A simplified label should improve label readability and comprehension. Therefore, there is a high percentage of improved efficacy and cost-effectiveness. ➤ Digitalised pesticide information will reduce the burden of excessive writing on the label and hence simplify the readability and its interpretation.

	<p>South Africa</p> <ul style="list-style-type: none"> ➤ Digital means will be advantageous to people who have access to digital systems as well as for people in areas with no network/connection problems. ➤ Digital means will be cost-effective because it is paperless. ➤ If labelling will only be available digitally, productivity and efficiency will increase because of the probable indiscriminate use of pesticides that short-term will yield positive results but cause detrimental effects on human health and crop yield. <p>Uganda</p> <ul style="list-style-type: none"> ➤ The benefits include increased access to information about pesticides and cost-effectiveness. <p>Zambia</p> <ul style="list-style-type: none"> ➤ Digital labels will last longer and improve effectiveness, productivity, and efficiency.
MIDDLE EAST	<p>Iran</p> <ul style="list-style-type: none"> ➤ Considering that only a few countries possess the technology of designing and producing pesticides, digital labelling is good idea.
LATIN AMERICAN AND CARRIBEAN	<p>Trinidad and Tobago</p> <ul style="list-style-type: none"> ➤ Many pesticides are imported with QR codes. ➤ Currently, digital labelling is optional to manufacturers.

REGION	CHALLENGES
AFRICA	<p>Malawi</p> <ul style="list-style-type: none"> ➤ The challenge with this system is that it is not easily accessible for farmers who have literacy barriers and are poorly resourced consumers. ➤ Uniformity and preventing locally incorrect ideas are a challenge. ➤ As pesticides are complicated chemical compounds, adding/taking out information on pesticides should be done by experts only. <p>Nigeria</p> <ul style="list-style-type: none"> ➤ A major disadvantage for LMICs is that a large percentage of pesticide users (low scale farmers) lack the technical knowledge that is required to access digital labels and the interpretation thereof is hindered. <p>Tanzania</p> <ul style="list-style-type: none"> ➤ Internet connectivity, ICT tools and language barriers are one of the challenges in many LMICs. <p>Uganda</p> <ul style="list-style-type: none"> ➤ Digital connection due to lack of access to ICT facilities can be a challenge. <p>Zambia</p> <ul style="list-style-type: none"> ➤ Monitoring the compliance and the enforcement of regulations concerning labelling is a challenge in LMICs.
EUROPE	<p>United Kingdom</p> <ul style="list-style-type: none"> ➤ E-labelling is a new concept but will have limited impact unless more farmers have modern telephones or computers. ➤ A label should have limited information on it e.g., trade name, colour coding, name of the active ingredient(s) and the recommended application rate. In addition, a leaflet with the most important information should be provided. ➤ Ideally, information should be in a local language if possible as well as English. Labels with three or more languages may have small sizing.

Resources and Further Reading

- EU Law: <https://eur-lex.europa.eu/homepage.html>
- About the GHS: <https://unece.org/about-ghs>
- CLP Legislation: <https://echa.europa.eu/regulations/clp/legislation>
- Web-distributed Labelling for Pesticides: <https://www.epa.gov/pesticide-labels/web-distributed-labeling-pesticides>
- Web-based Distribution of Electronic Labels: Implications for Pesticide Safety Education Amy E. Brown, Professor, University of Maryland, College Park, MD
<https://aapse.wildapricot.org/resources/Documents/AAPSE%20Publications/JPSE/ARTICLES/9/public/9-31-1-PB.pdf>
- A European Green Deal: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1576150542719&uri=COM%3A2019%3A640%3AFIN>
- Chemicals strategy for Sustainability: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A667%3AFIN>

- Chemical's strategy priorities: https://ec.europa.eu/info/strategy/priorities-2019-2024_en
- Shaping Europe's digital future - European Commission: https://ec.europa.eu/info/sites/default/files/communication-shaping-europes-digital-future-feb2020_en_4.pdf
- Digital single market: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52015DC0192>
- Survey among agricultural workers about interpretation of plant protection product labels and safety data sheets. M. Rubbiani (January 2010 Annali dell'Istituto superiore di sanita 46(3):323-9 DOI:10.4415/ANN_10_03_17) <https://www.researchgate.net/publication/46288643>

If you are not a member, we invite you to join UCT's Pesticide Discussion Forum:
<https://forms.gle/NzYH5REfUruL3jdm6>

The **Division of Environmental Health (DEH)** Pesticide Discussion Forum is a bi-monthly online seminar for pesticide regulators and resource persons, as well as students in the postgraduate Diploma in Pesticide Risk Management (DPRM). Our aim is to provide support for managing pesticide risks and implementing risk reduction strategies. DEH is based in the School of Public Health and Family Medicine at the University of Cape Town (UCT). environmentalhealth@uct.ac.za

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