# **Policy Brief** Recommendations for responsible pesticide trade and uses in coffee sector in the Central Highlands of Vietnam

The Central Highlands has been the largest coffee producer in Vietnam for the last 50 years. The monocoffee system, together with increased uses of chemicals, has driven the region into ecological troubles: land degradation, biodiversity loss, water shortage. Reduced ecosystem services quality is the main reason to input efficiency reduction. Research by Thong (Tay Nguyen University, 2018) in Dak Lak indicates that coffee productivity can increase by 36% without additional chemical investments.

## Introduction

Aiming at contributing to greening strategy for Vietnamese agriculture, the Global Coffee Platform (GCP) Viet Nam has launched a 5-year Collective Action Initiative, targeting improvement of sustainable coffee production and farmer's income in the Central Highlands. One of GCP's efforts is to inventory pesticides in the retail system in the region, from which extent of local pesticide trade and uses and constraints in the existing retailing system which may drive to wrong and overuses of pesticides by farmers in the region are assessed.

The survey was conducted in the two selected districts: Krong Nang of Dak Lak and Di Linh of Lam Dong Province, in Nov. 2020. In total, 120 pesticide retail shops were inventoried. These shop owners and other 14 relevant stakeholders at different levels were interviewed for further information.

## **Research results**

There is evidence that the market price of the crop produces is an important factor governing farmer's use of pesticides. The increase of pesticides registered for coffee does not mean increases of pests and diseases pressure on coffee in recent years, but likely further puzzles the pesticide market for coffee.



Pesticides reaistered in Vietnam was peaked in 2013, and reduced from 2016 under MARD efforts, but those targeted for coffee kept increasing

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A large list of pesticides traded and used in the Central Highlands A list consisting of 1,207 and 237 for formulations and Ais, respectively has been identified in the two districts. Of these formulations, most are insecticides, and followed by herbicides. In addition, formulations that are not found in the MARD 2019 pesticide list are 212.

Of the identified list of pesticides, 371 formulations and 150 Ais are similar in the two districts. The rest are different. There are 157 pesticide companies having products sold in Di Linh that are also all presented in Krong Nang. This means that: the same pesticide company has marketed different pesticides in two study districts.

44% of pesticides (for both formulations and Ais) belong to WHO toxicity of moderately hazardous category. Highly hazardous pesticides are presented at 17%. One extreme hazardous pesticide is still found (Ethoprophos)



## Pesticides inventoried in the two districts

Note: Pesticide toxicity categories were based on WHO (2019) and PAN Pesticides Database; Unknown=pesticides not found in the MARD pesticide list 2019.



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Pesticide violation still exists	Some forbidden pesticides such as Ethoprophos (forbidden in 2018, registered for pepper) and Carbenzim (forbidden in 2019, registered for coffee and some other crops) are found during pesticide inventory.
	In addition, LAB analysis results identify three pesticides of Ai violation (out of the 52 formulations that are most presented in the local retail system) including: Mekongvil 5SC (Hexaconazole), Sprayphos 620SL (Phosphorous acid), and Supremo 41SL (Glyphosate).
Herbicides presented at a huge difference between the two districts and among communes.	There are 155 herbicide formulations with 34 Ais found in the two study districts, of which 24 formulations and 6 Ais are pesticides registered for coffee. Glyphosate is the dominating herbicide with 59 formulations.
	Some communes mostly rely on Glyphosate for weed control, reflecting differences in herbicide retailing systems and farming practices among coffee communes, as well as in developing an intervention strategy for herbicides and weed management alternatives.

## Herbicides inventoried at communal level in the two districts



Pesticide market is increasingly competitive and puzzling More actors start their business in the pesticide sector, which drives to:

- 1. Increasing competition
- 2. Increasing demands on pesticide deviants by local retailers that are further puzzling the pesticide market
- 3. Puzzled market traps farmers not only in pesticides but also pesticide technical know-how into pesticide retailing systems.

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**Policy recommendations** 

Further strengthening government capacity	<ul> <li>Further collaborate with the Rotterdam Convention to strengthen hazardous pesticide management.</li> <li>Agroecology-based knowledge and alternatives to be integrated into pesticide management policies.</li> </ul>
Pesticide market clearance	<ul> <li>Tightening control of forbidden pesticide trade and uses.</li> <li>Continuing to scan and remove generic, low-quality pesticides from the legal list of pesticides and their existence in the market (cf. <u>Hoi and Mol et al., 2009</u>).</li> <li>Making regulations and control of pesticide deviant development.</li> <li>Further tightened conditions for new pesticide business development should be considered.</li> </ul>
Strengthening research, extension, and adoption of agroecology	<ul> <li>Supporting network initiatives on agroecology among local universities, extension systems, and coffee farmer's cooperatives.</li> <li>Improving farmer's capacity on agroecology to improve their awareness of the value of ecosystem services; to change their perception of pest and weed management, and to adopt agroecology to enhance their farming efficiency.</li> </ul>
Glyphosate control	<ul> <li>To effectively control Glyphosate uses after its ban in the mid-2021, risks incurred from using Glyphosate regarding EU requirements for coffee exported from Vietnam, together with technical guidances on alternative herbicides as well as ecology-based weed management possibilities, need to be widely disseminated to coffee farmers through central and local public media.</li> <li>Interventions should give more attention to communes that have heavily relied on Glyphosate for weed control.</li> </ul>

#### References

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