"Selling pesticides like biscuits" – Governance challenges of pesticide supply in Zambia

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Background

- While it is commonly believed that smallscale farming in SSA is still "organic by default", in some regions a "pesticide revolution" manifests (see graph).
- Main drivers are cheap generic pesticide imports from Asia, rising costs for manual labour, rising pest pressure and commercialization of farming.



- Consequentially, pesticide markets are booming. Plenty of new brands, importers and traders enter the market.
- Yet, in poorly regulated environment poor pesticide management is ubiquitous. E.g., low adoption of protective equipment, food and environmental contamination (see images on the right).

Methods

- Conceptual framework of governance challenges based institutional economics along the pesticide life cycle (see below).
- Desk review of Zambian pesticide policies and laws
- 13 Process Net-Maps (Participatory stakeholder mapping) combined with 87 qualitive interviews with a wide range of stakeholders (public administration, pesticide importers, NGOs and local agrodealers etc.)









Pictures illustrate poor pesticide management practices (e.g., refusal of protective equipment, food contamination and deliberate dumping of packaging) that are common countries where the institutional support for pesticide users is weak.





• 18 Farmer group discussions and Participatory Impact Diagrams with 160 farmers to monitor practices and impacts at farm level.



Pictures of informal pesticide trade in Zambia. Highly-hazardous pesticides are sold in a very improvised set-up to smallholders, enticing them to be used without information on their mode of action and precautions.

Results cycle Pesticide Import & Pesticide Use & Registration Distribution border **Food markets** disposal policies life control Registration Lack of political Smuggling is • Food poisoning Most small pesticide • Due to imperfect challenges interest to tighten widespread due to procedure is due to pesticide dealers are not information and risk pesticide policies. arbitrary and trials low frequency of residues was neglection farmers licensed. are not required for border patrols. reported. thus use pesticides Stakeholders lack Counterfeit and generic products. indiscriminately. information on • Low incentives to • Import are rarely unlabelled products nance Lack of inspected and not external costs. minimize residues are sold to farmers. • Despite high negative laboratories and tested due to lack due to information impacts benefits are • Pesticide dealers are staff.



of laboratories and staff.

untrained and convey biased information.

more attractive to farmers.

asymmetry and weak monitoring.

Conclusions



- Pesticide uptake increases rapidly in SSA (i.e., "pesticide revolution") and must be institutionally supported otherwise it threatens to thwart sustainable development.
- Despite long-term international efforts, hazardous pesticides are still available to smallholders and regulation systems are ineffective in ensuring sustainable pesticide management.
- Imperfect information induces stakeholders to systematically underestimate pesticide costs. Therefore, public demand for stricter policies is low.
- Efforts should be made to monitor pesticide costs and design viable ways of pesticide policy enforcement.