

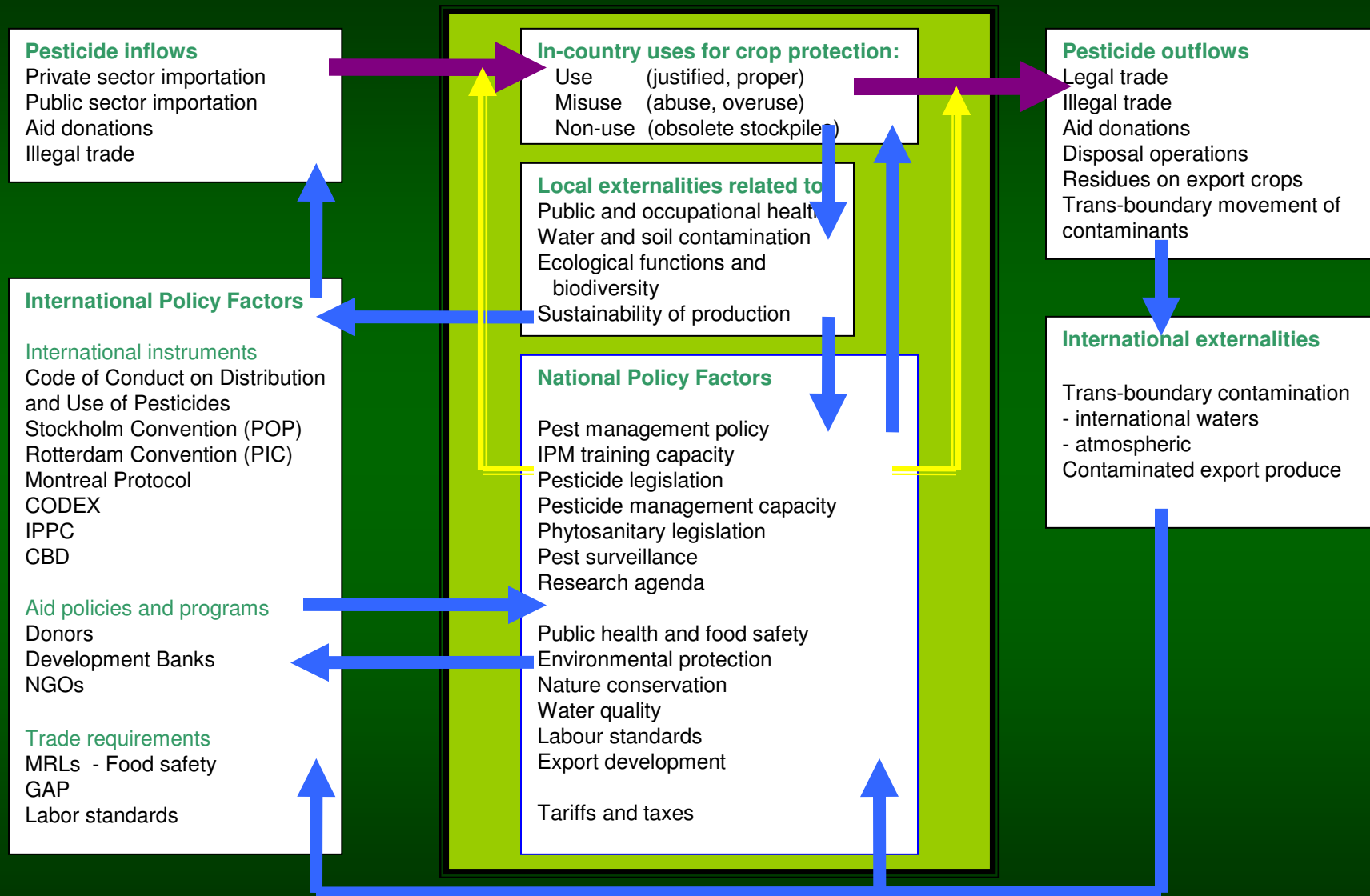
**A Global Perspective on
Pesticide Risk Reduction
and the role of IPM**

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Pest and pesticide management policy development



National policies

Pest and pesticide management policy

- IPM training capacity
- Pesticide legislation
- Pesticide management capacity
- Phytosanitary legislation
- Pest surveillance
- Research agenda

Other sector policies affecting pesticide use

- Public health and food safety
- Environmental protection
- Nature conservation
- Water quality
- Labour standards
- Export development

International policies

International instruments

- Code of Conduct on Distribution and Use of Pesticides
- Stockholm Convention (POP)
- Rotterdam Convention (PIC)
- Montreal Protocol
- CODEX
- IPPC
- CBD

Aid policies and programs

- Donors
- Development Banks
- NGOs

Trade requirements

- MRLs - Food safety
- GAP
- Labor standards

It is all about Risk Reduction

Agronomic

- **Induced pest outbreaks** resulting from adverse effects of pesticides on natural enemy populations;
- **Pest resurgence** through development of resistance or adverse effects on natural enemy populations.
- **Crop burn** or destruction through over-dosing or herbicide drift.

Health

- **Acute poisoning or chronic health impairment** of pesticide users (e.g.: from exposure while mixing or applying pesticides, or entering treated fields).
- Acute poisoning or chronic health impairment due to consumption of food or water contaminated with pesticide residues.

Environment

- **Contamination of water resources** (ground and surface water) affecting aquatic or soil ecology.
- **Adverse effects on the natural resource base for agriculture** (biodiversity, natural pest control mechanisms, pollinators, etc.) and wildlife.

Trade

- **Market access constraints related to pesticide residue** requirements related to food safety concerns.

Principles for risk reduction related to pesticide use

1. Reduce pesticide use, where feasible.
 - Eliminate overuse
 - Reduce reliance on pesticides
 - More accurate application
2. Better selection of pesticides.
 - Favour the least harmful products
3. Ensure proper use of the selected products in line with international standards.

Examples of how to achieve pesticide risk reduction ?

Policy reform

Regulatory control

- Pesticide legislation and its enforcement
- Regular review of list of registered pesticides to reflect latest health and environmental information.

Non-regulatory measures to enhance better selection of products

- Enhance awareness about, and access to, none or less hazardous alternatives
- Financial incentives/disincentives

Field level

- Promotion of IPM (Resource allocation to education, extension and research)
- Enhance access to alternative approaches and products

Promotion of GAP (Crop protection based on IPM)

FAO

International Code of Conduct on the Distribution and Use of Pesticides

- Adopted in 1985, revised in 2002
- Specifies responsibilities of governments, pesticide industry and other stakeholders - Voluntary
- Addresses the need for a cooperative effort to promote practices that **minimize** potential health and environmental **risks** associated with pesticides, while ensuring their effective use.
- Specifically addresses: Regulatory and technical requirements; reducing health and environmental risks; testing of pesticides; availability and use; distribution and trade, information exchange; labelling, packaging, storage and disposal; advertising; monitoring and observance of the Code.
- Provides internationally accepted definitions.

International Code of Conduct on the Distribution and Use of Pesticides

Definition of IPM

Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

International Code of Conduct on the Distribution and Use of Pesticides

Articles related to promotion of IPM

- 3.7 Concerted efforts by governments to develop and promote the use of IPM. Including the development of National IPM policies.
- 3.8 All stakeholders, should play a proactive role in the development and promotion of IPM.
- 3.9 Promote research on, and the development of, alternatives posing fewer risks.
- 5.1 Support for IPM extension
- 8.1 Prevention of excessive or unjustified use due to subsidies or donations.

International Code of Conduct on the Distribution and Use of Pesticides

Articles related to better selection of products

- 3.4 Pesticide industry should pay special attention to choice of pesticide formulations in order to reduce risk
- 3.5 Pesticides that require elaborate use of protective gear should be avoided in case of small-scale users in tropical climates
- 5.2 Industry should make less toxic formulations available
- 6.1 Government should conduct risk evaluations
- 7.5 Class I pesticides should be prohibited if proper handling cannot be ensured

FAO and IPM

FAO has supported the promotion of IPM for over 3 decades, and assisted with the development of IPM programmes in a large number of countries. Some of the main lessons learned:

- In most cases, there is significant pesticide overuse that can be eliminated without loss in crop production.
- Broad adoption of IPM requires policy reform.
- Promotion of IPM requires farmer education. Introduction of IPM can start with simple measures and then gradually develop into more complex approaches.
- Three principles: Grow a healthy crop; Manage the agro-ecosystem to suppress the build-up of pests; Decisions to apply inputs are made locally, are based on monitoring of pest incidence and are site-specific.
- Formation of networks for exchange of information and experience is important

IPM is now considered an integral part of pesticide risk reduction.

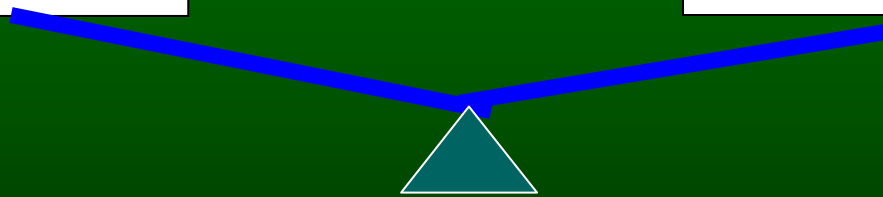
Economics of pesticide use

Benefits

Reduce crop losses

Costs

Health
Environment
Agro-ecology
Trade



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Role of government

Secure agricultural production - Minimize pesticide costs
Finding a balance

Common causes of imbalances..... and how these could be corrected

Benefits of pesticides

Reduce crop losses

The viability of alternative pest management approaches is often not fully understood.

Consequently, the benefits of pesticide use are often **over-estimated**

Demonstrate effectiveness and economic viability of alternatives (IPM, biological control) and potential for pesticide reduction\rationalisation (economic analysis).

Common causes of imbalances..... and how these could be corrected

Magnitude of social costs of pesticide use is often not fully understood and consequently **under-estimated**

Costs

Health
Environment
Agro-ecology
Trade

Better assessment of social costs:
Research, surveys, data-collection to quantify social costs. E.g.: residue testing of crops; monitoring of poisoning incidences; assessment of environmental impact

Use policy tools
to restore balance

Benefits

Reduce crop losses

Costs

Health
Environment
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Role of government

Secure agricultural production - Reduce pesticide costs
Finding a balance

Remember.....

.....Change of field practices is key

- Reducing exposure of farmers
- Reducing pesticide residue levels on crops
- Reducing water contamination



All need changes in production practice



Such objectives need to be supported by measures that enable farmers to produce differently !!!

Key: Training; access to alternative strategies and inputs; incentives

Thank You