CHALMERS | UNIVERSITY OF GOTHENBURG

Managing health and environmental risks in programmes involving pesticides

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Sida's Helpdesk for Environment and Climate Change

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ABOUT US

Sida's Helpdesk for Environment and Climate Change is commissioned by Sida – the Swedish International Development Cooperation Agency – to assist Sida staff in integrating environmental (including climate change and disaster risk reduction) perspectives into Swedish development cooperation. The Helpdesk gives support, on demand, by providing advice and strategic guidance on environmental integration at policy, program and project level. It also supports capacity building, development of tools and methods for environmental integration and dialogue concerning environmental issues.

RECENT ACTIVITIES

Climate Change in Syria – trends, projections and implications (2015)
This background document has been developed as an input to the Swedish results strategy process for Syria at the request of Syria Strategy Group, Sida, Stockholm.

Colombia Environment and Climate Change Policy Brief (2015)
This Policy Brief outlines key environmental and climate change issues in Colombia and discusses how these are linked to conflicts, human rights and

Swedish **media (**March 2012) ”Pesticides sold with aid”

Centre for Environment and Sustainability, GMV

CHA

Swedes to sue Commission over paraquat

THE Swedish government is to sue the European Commission at the Court of Justice over its decision to relicence paraquat, the highly toxic herbicide.

EUROPEAN VOICE
By **ROGER FALK** | 2/11/04, 5:00 PM CET | Updated 4/12/14, 9:43 AM CET

It is the first time that Sweden has launched proceedings over an issue which does not have solely national implications.

Lena Sommestad, the country's agriculture minister, described paraquat as an "unacceptable weedkiller which does not belong in a sustainable agriculture".

The precise grounds for legal action have not yet been decided, but it is likely the government will refer to the 'precautionary principle' and protection clause in the EC treaty, as well as the directive on plant protection products.

Paraquat is currently banned in Sweden, Austria, Denmark and Finland, as well as being subject to severe restrictions in Hungary and Germany. However, it is legal in many major crop-producing countries, including the US, China, Mexico, Costa Rica and Brazil.

The European Commission's standing committee on the food chain and animal health relicenced paraquat for ten years last September – a decision that could force countries which have banned it to lift their restrictions.

The Swedish government believes that its environmentally aware and generally

tainability, GMV

The role of the helpdesk

- Zambia
  - Support to Musika on development of environmental management system
  - Comments on ToR and Draft Report of agrochem study
- Tanzania
  - Conducted the study in collaboration with two experts on chemical management from our resource pool
- Expert reference group: Kemi, SLU, UCT

Recent research point to severe health risks related to pesticide use among small-holders in tanzania

Lekei *et al. BMC Public Health* 2014, **14**:389
http://www.biomedcentral.com/1471-2458/14/389

BMC Public Health

RESEARCH ARTICLE Open Access

Farmers' knowledge, practices and injuries associated with pesticide exposure in rural farming villages in Tanzania

Elikana E Lekei[1*], Aiwerasia V Ngowi[2] and Leslie London[3]

Abstract

Background: Pesticides in Tanzania are extensively used for pest control in agriculture. Their usage and unsafe handling practices may potentially result in high farmer exposures and adverse health effects.
The aim of this study was to describe farmers' pesticide exposure profile, knowledge about pesticide hazards, experience of previous poisoning, hazardous practices that may lead to Acute Pesticide Poisoning (APP) and the extent to which APP is reported.

Methods: The study involved 121 head- of-household respondents from Arumeru district in Arusha region. Data collection involved administration of a standardised questionnaire to farmers and documentation of storage practices. Unsafe pesticide handling practices were assessed through observation of pesticide storage, conditions of personal protective equipment (PPE) and through self-reports of pesticide disposal and equipment calibration.

Results: Past lifetime pesticide poisoning was reported by 93% of farmers. The agents reported as responsible for poisoning were Organophosphates (42%) and WHO Class II agents (77.6%).
Storage of pesticides in the home was reported by 79% of farmers. Respondents with higher education levels were significantly less likely to store pesticides in their home (PRR High/Low = 0.3; 95% CI = 0.1-0.7) and more likely to practice calibration of spray equipment (PRR High/Low = 1.2; 95% CI = 1.03-1.4). However, knowledge of routes of exposure was not associated with safety practices particularly for disposal, equipment wash area, storage and use of PPE . The majority of farmers experiencing APP in the past (79%) did not attend hospital and of the 23 farmers who did so in the preceding year, records could be traced for only 22% of these cases.

Conclusions: The study found a high potential for pesticide exposure in the selected community in rural Tanzania, a high frequency of self-reported APP and poor recording in hospital records. Farmers' knowledge levels appeared to be unrelated to their risk. Rather than simply focusing on knowledge-based strategies, comprehensive interventions are needed to reduce both exposure and health risks, including training, improvements in labeling, measures to reduce cost barriers to the adoption of safe behaviours, , promotion of control measures other than PPE and support for Integrated Pest Management (IPM).

Important area of concern

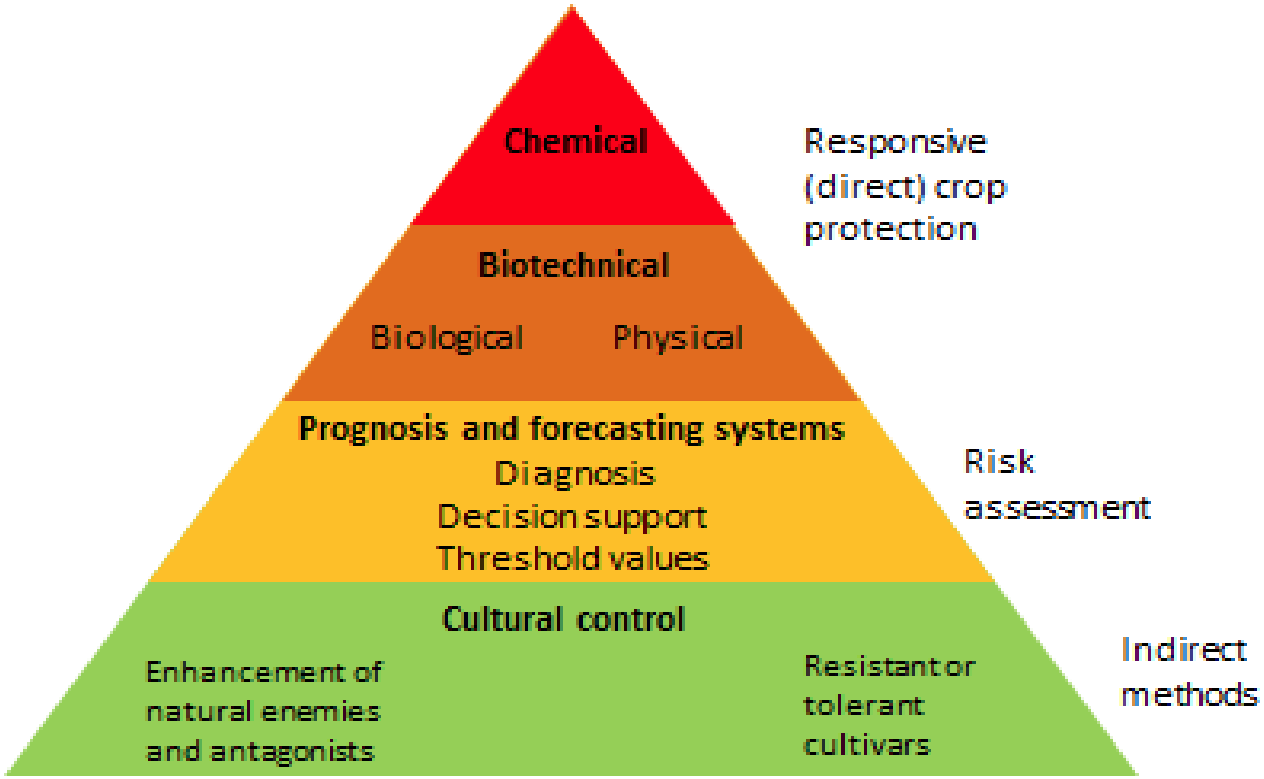
- Real health and environmental risks involved
  - Storage
  - Use
  - Disposal
- Knowledge gap
  - Data not readily available (use and effects)
  - Many actors involved
- Large potential for improved practices

International good practice

- FAO/WHO Code of Conduct on Pesticide Management
- US AID – Pesticde Evaluation Report and Safe Use Action Plan
- IFC Safeguards

- Key elements
  - Integrated Pest Management
  - Black listing of certain pesticides
  - Risk assessments and management plans
  - Training
  - Monitoring

Integrated Pest Management (IPM)



Source: After Meissle et al 2011

Sweden a front-runner in chemical management

- Goal ”A non-toxic environment”
- Pushes for more stringent regulations in EU and internationally
- Swedish Chemical Agency (KEMI)

Important that also Sida supported programmes pro-actively manage risks related to pesticides

Recommendations

- Clarify Sida's position on the use and management of pesticides.
  - IPM & allowed/banned substances?
- Make it mandatory for partner organisations to conduct an assessment of health and environmental risks for programmes involving pesticides.
- Assure that there is a plan to monitor and manage the identified health and environmental risks.
- Include environment and health aspects in contractual agreements with partner organisations
- Support government capacity to regulate agrochemical market and promotion of IPM