



Environmental Management Tool Kit Volume 5

Contaminated Land Risk Assessment & Management

Reality check....we work in developing countries

- Things we take for granted
 - Legislation
 - Awareness
 - Political will
 - Is one of many competing issues
 - Technology

Logos of the European Union, FAO, GEF, Green Cross, IHPA, Hellenic Republic, UNEP, and World Health Organization.

Our response

- Training
- Awareness raising
- Impartial technical advice
- Guidance materials
- Partnership based on comparative advantage
- Synergies

Logos of the European Union, FAO, GEF, Green Cross, IHPA, Hellenic Republic, UNEP, and World Health Organization.

Why is FAO involved?

- Soil is a limited Natural Resource
- Healthy soil = healthy food
- Soil losses impact food security
- Soil contamination enters food chain



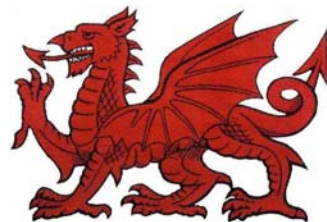
Why is FAO involved?

- FAO mandate
- Global presence
- Impartial advice to member countries
- All aspects of food production
- Includes plant and animal diseases
- Pesticide risk reduction group



What is my role?

- Geochemist
- PhD nuclear wastes
- 10 years intl waste contractor
- 13 years Senior Officer obsolete pesticides
- Head of NR Group REU
- EC and GEF programme manager
- Author EMTK series



Introduction

- History of FAOs involvement
- EMTK 1 – 4 development
- EMTK volume 5
- Next steps



History

- Code of Conduct on Distribution and Use of Pesticides
- Secretariat of Rotterdam Convention
- Intl. Plant Protection Convention 178 signatories
- AGMP Obsolete Pesticides Management since 1992
- Operating in 40 countries world wide



History

- Move away from ad-hoc responses to requests for support to a systematic programme
- Provide a structure
- Can't assume capacity
- Needs to pass the KISS test
- In the words of Einstein:
"Any intelligent fool can make things bigger and more complex... It takes a touch of genius --- and a lot of courage to move in the opposite direction"



EMTK 1 – 4 Development

- Objective
- Risk based
- Step-by-step approach
- Sound regulatory foundation from Europe and USA
- Practical - based on tried and tested methods
- Multilingual



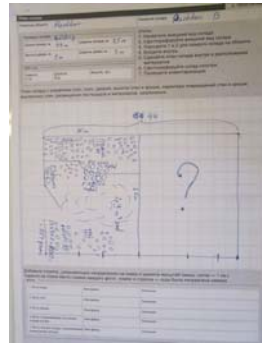
EMTK 1 – 4 development

- EMTK 1 – Pesticide Stock Management System
- EMTK 2 – Collection centre selection / Store Management / Transport Strategy Development
- EMTK 3 – Safeguarding / Disposal / Transport strategy Development
- EMTK 4 – Technical guide & tools for Safeguarding Projects



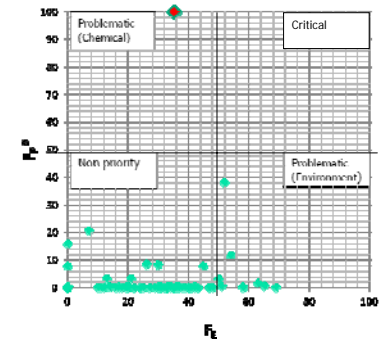
EMTK 1 – 4 development

- EMTK 1 – Pesticide Stock Management System
 - System of management of live stocks
 - Inventory of obsolete stocks
 - Environmental risk assessment of pesticide storage locations



EMTK 1 – 4 development

- EMTK 1 – Environmental risk assessment of pesticide storage locations



Pascani Site, Moldova

Product Risk Factor F_p
versus Environmental Risk
Factor F_e

(plotted against anonymous country data
for comparison)



EMTK 1 – 4 development

- EMTK 2
 - Selection of sites suitable for storage
 - Management of OP storage locations & collection centres
 - Development of transport plans for safe movement of pesticides



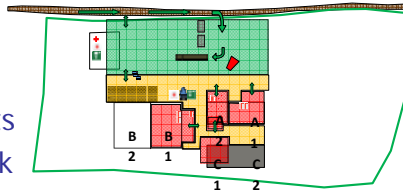
EMTK 1 – 4 development

- EMTK 3
 - Takes outputs from EMTK 1 & 2
 - Allows countries to develop risk mitigation strategies
 - Country / regional level



EMTK 1 – 4 development

- EMTK 4
- Supervision of safeguarding projects
- Practical tools for risk management
- Standardised
- US OSHA, EU Directives



Fire truck		Vehicle Movement	
First aid kit			
Emergency Shower		Zone 1	
Eye wash		Zone 2	
Medical point		Zone 3	
Entry / exit point		Site Boundary	
Fire extinguisher		Changing station	
Road		Packaging storage	



EMTK 5

- There's a gap
- Poor management of stocks above ground has led to a legacy of contamination
- Below ground situation can be more dangerous



Salyan Azerbaijan 800 drums Polidophen – DDT / Toxaphene / Diesel in a residential area



EMTK 5

- Issue is of particular importance in former Soviet Union
- EC support to develop capacity to address this problem
- Project *Improved Pesticide Management in FSU*
- EUR 6M grant to FAO to support countries
- USD 8.1 from GEF for CACs
- Adaptation and translation of existing materials
- Development of new materials including EMTK 5
- Site assessment and clean up activities



EMTK 5

- FAO to develop EMTK5 Guidelines
- Funded by European Commission and GEF
- Module in the Post Graduate course on Pesticide Risk Reduction
- Designed to help Low to Middle Income countries with pesticide contaminated land
- Systematic and pragmatic; similar to EMTKs 1-4
- Risk based



EMTK 5

- Challenge for FAO:
 - flexible for use in FAO member countries worldwide;
 - based on sound scientific principles;
 - transparent;
 - relatively easy to use and implement; and is
 - cost effective.



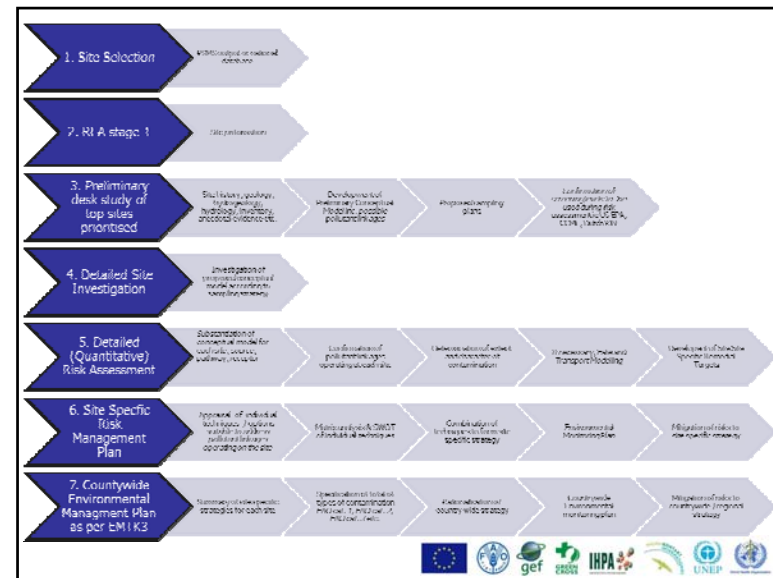
EMTK 5

- Many systems available:
 - Canadian CCME system
 - US EPA
 - Netherlands
 - UNIDO POPs tool kit
- Country, population, geographic & legislatively specific
- Not always suitable or relevant to countries where FAO works



EMTK 5

- In common with other systems:
 - Risk based
 - Based on conventional Source – Pathway - Receptor model
 - Tiered assessment
 - Tier I – Preliminary Site Investigation
 - Tier II - Generic Quantitative Risk Assessment
 - Tier III – Detailed Quantitative Risk Assessment (if necessary)



EMTK 5

- EMTK 5 time line for development
 - Drafting now
 - Peer review by end of 2013
 - January 2014 target for production of EMTK 5 Guidelines
 - Associated Module for Post Graduate Course



And finally.....

- A vote of thanks for the organisers
- A thank you to the countries which have presented
- Thanks to the other presenters for sharing their experience and knowledge
- And a big thank you to the EC Europe Aid team and GEF Chemicals unit or their continued support to countries through FAO

