



USAID
FROM THE AMERICAN PEOPLE

Pesticides in USAID Projects: Environmental Requirements and Considerations

What are pesticides?

Pesticides are biological, chemical or physical agents used to kill unwanted plants, animals, or disease agents.

What about “natural” or “biological” pesticides?

*Pesticides derived from natural sources (like **Pyrethrum**) are still pesticides.*

What about disinfectants?

*The purpose of disinfectants is to kill bacteria or viruses. **Disinfectants are also pesticides.***

Typical pesticide uses in developing countries

In-field crop protection	Area spraying for mosquito and other disease vector control	Dosing of lakes, ponds & lagoons to control disease vectors
Household insect and structural pest control	Stored product protection (seeds, food aid crops, etc.)	Insecticide treated bed nets & Interior household residual spraying
Treatment of export crops, fumigation of timber	Outbreak pest control – locusts, rodents, etc.	Livestock tick control-dipping, spraying, pouring

And other uses...

USAID's Pesticide Procedures 22 CFR 216.3(b)

**In this presentation,
we will see that that
USAID's pesticide regulations
are quite strict. . .**

Why ?

Why are the regulations strict?

Pesticides are often essential.

But pesticides are potent killing agents. Their use has intrinsic dangers.

In the developing world, these dangers are worse because:

- **Quality control** in manufacture, handling, labeling and packaging is **often poor.**
- **Poor use practices** are **wide-spread.**

Main dangers of pesticide use:

Pesticides can. . .

- **Damage non-target ecosystems**
- **Affect non-target organisms (e.g., the “good bugs”)**
- **Be dangerous to human health**
- **Persist/accumulate in the environment**
- **Lead to resistance and to resurgence of pests**



In short,

Good development practice requires caution when using pesticides.



**Obsolete pesticides:
a serious environmental failure**

picture: UN FAO

! **And remember:**
Good practice is U.S. Law.
These pesticide regulations are part of Regulation 216*.

Regulation 216 is the result of a lawsuit brought against USAID in the mid-1970s by environment NGOs after several pesticide poisoning incidents. USAID takes its pesticide procedures very seriously.

(*See 22CFR216.3(b))

Objective of the regulations

It is USAID policy
to apply the principles of
INTEGRATED PEST MANAGEMENT (IPM)
to every activity that
involves or influences
pesticide procurement
or use.

Properly implemented,
the regulations should assure
that the principles of **IPM**
are realized in practice. . .

What is

Integrated Pest Management?

IPM....:

Is ecologically-based pest management that promotes the health of crops and animals, and makes full use of natural and cultural control processes and methods, including host resistance and biological control.

Uses chemical pesticides only where and when the above measures fail to keep pests below damaging levels.

All interventions are need-based and applied in ways that minimize undesirable side effects.*

In IPM, the use of pesticide is as a “last resort.”

When a pesticide IS used:

The pesticide chosen is the “least toxic” to do the job.

IPM requires that application be as safe and selective as possible.

Safe for the farmer and his family, Safe for the consumer, Safe for the ecosystem.

What do USAID's regulations require?

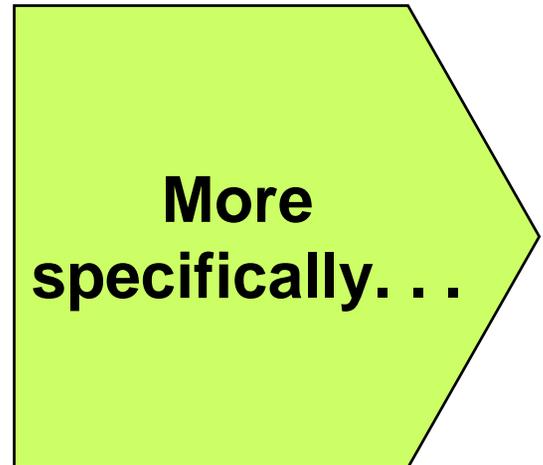
Simply stated. . .

IF

“Pesticide procurement or use”
is part of a proposed activity,

THEN:

**Additional EIA and
analysis is *required***



What do USAID's regulations require?

Reg. 216 states:

“ When a project includes assistance for procurement or use of pesticides....., the Initial Environmental Examination for the project shall include a **separate section** evaluating the economic, social and environmental risks and benefits of the planned pesticide use to determine whether the use may result in significant environmental impact”

(22 CFR 216.3(b)(1))

To comply, you must know:

A

what is “procurement or use?”

B

What is required in the “extra section” of the IEE?

A

What is “pesticide procurement or use”?



Be aware...

**USAID interprets
“pesticide procurement
or use” very broadly.**

Specifically...

A

What is “pesticide procurement or use”?

Procurement includes . .

1. **Direct purchase of pesticides**
2. **Payment in kind, donations, provision of free samples and other forms of subsidies**
3. **Provision of credit to borrowers could be procurement**
4. **Guarantee of credit to banks or other credit providers could be procurement**

Use includes . .

1. **Sale**
2. **Handling, transport, storage,**
3. **Mixing, loading, application**
4. **Disposal**
5. **Provision of fuel to transport pesticides**
6. **Technical assistance in pesticide management**

A

What is “pesticide procurement or use”?

AND the regulations also usually apply to . . .

! export-oriented projects involving commodities that require pesticides, even if USAID is not using or procuring directly.

This is a type of indirect procurement/use.

A

The definition of “procurement or use” does **NOT** include. . .

- ❖ Pesticide used in **evaluation plots** & other research, **IF** the following requirements are met:
 - *Surface area of under 4 ha,*
 - *Supervised by researchers,*
 - *Application by trained individuals*
 - ***The treated products are not consumed by people or animals,***
- ❖ **Technical assistance for development of host country pesticide regulatory capabilities**
- ❖ **Support for training in safer pesticide use, **not involving actual application or use of pesticides.****

What about EMERGENCY SITUATIONS and other exceptions?

The Pesticide Procedures do not apply to:

- Projects under **emergency conditions**.
- Projects where **USAID is a minor donor**.

However, a decision to provide assistance will be based to the maximum extent possible on the factors normally required in the pesticide section of the IEE.

See 216.3(b)(2).

What are “emergency conditions”?

The USAID Administrator determines in writing that:

A pest outbreak has occurred or is imminent;
AND

Significant health or economic problems will occur without prompt use of the proposed pesticide;
AND

Insufficient time is available to follow normal procedures.

A

Fertilizers are *not* subject to USAID's Pesticide Procedures

Fertilizers are often lumped with pesticides under the generic heading of “agrochemicals.”

BUT the Pesticide Procedures do *not* apply to:

- Use of synthetic fertilizers
- Use of organic fertilizers

Still, the IEE can specify and identify good fertilizer use and soil fertility practices.

What does “proper fertilizer use” entail?

Based on soil chemistry tests, knowing the soil nutrient conditions for thoughtful selection of apt mixtures of nutrients

Integrated soil fertility management, guarding soil health and tilth

Good timing linked to water management

Understanding of the socio-economic conditions

B

What does the “additional analysis” (EIA process) include?

❖ For pesticides approved by the U.S. Environmental Protection Agency for the *same or similar use*, the pesticide section of the IEE or EA must explain or assess these 12 factors of the Pesticide Procedures:

a. The host country & US EPA **registration status** of the requested pesticide;

Registration status

Under US law, US EPA “registers” particular pesticides to particular uses.

b. **Basis for selection** of the pesticide;

Why is US EPA registration status important?



Note:
see 22 CFR 216.3 (b)(1)(i) for full text

Why is registration status important?

When the proposed pesticide is NOT approved for a similar use by US EPA,

Reg. 216 requires a full Environmental Assessment.

When the proposed pesticide IS approved for a similar use by US EPA, BUT the proposed use is RESTRICTED by US EPA on the basis of USER HAZARD,

Reg. 216 requires that the IEE *also* contain a user hazard evaluation.

! Pesticides restricted by or not approved by US EPA are considered high-risk!

B

The pesticide section of the IEE must **also** explain & assess:

- c. Extent to which the proposed pesticide use is **part of an integrated pest management program**;

Elements of an IPM program:

1. The pests and outbreak levels that trigger chemical control
2. The mix of control techniques to be used
3. Measures for pest monitoring
4. Measures for ensuring control methods are correctly and safely used
5. Use and maintenance of personal protective equipment
6. Training in safer use

B

The pesticide section of the IEE must **also** explain & assess (2):

- d. **Method(s) of application & availability of application & protective equipment;**
- e. **Any toxicological hazards;**
- f. **Effectiveness of the requested pesticide for the proposed use.**
- g. **Compatibility of the pesticide with the local ecosystems**

Effectiveness vs. unintended effects:

The pesticide portion of the IEE must evaluate **BOTH** how effectively the pesticide kills the target pest, and what impacts it **COULD** have on non-target organisms and ecosystems.

B

The pesticide section of the IEE must **also** explain & assess (3):

- h. **Environmental conditions** under which the pesticide is to be used;
- i. **Availability and effectiveness of other pesticides or non-chemical controls**;
- j. **Host country's ability to regulate the requested pesticide(s)**;

Non-chemical control methods might include. . .

Biological control

Manipulation of the environment

Induced sexual sterility

Physical control and repellants

Attractants and traps

Genetic manipulation of pest populations

B

The pesticide section of the IEE must **also** explain & assess (4):

- k. Provisions made for **training of users and applicators**
- l. Provision made for **monitoring the use and effectiveness of the pesticide.**

These 12 items (a-l) constitute the core of the Pesticide Procedures, and must be covered for every proposed pesticide.

Note:

If the proposed pesticide use is **RESTRICTED** by US EPA on the basis of **USER HAZARD**,

the IEE must also include a USER HAZARD EVALUATION.

Mitigation and monitoring for pesticides

The pesticide portion of the IEE requires you to consider a number of mitigation and monitoring measures

The effective and successful IEE will address these M&M issues proactively.

The IEE should emphasize. . .

- Non-chemical methods of pest control within an IPM program
- Provision of pesticide training and protective equipment
- Monitoring of pesticide use & application techniques
- Verifying registration status of the pesticide on an annual basis

Mitigation: Exposure Minimization Opportunities

Opportunities to minimize exposure exist before, during and after pesticide use. . .

Consider transport, packaging & storage practices

- Waiting periods
- Clean/bathing
- Storage & disposal practices



- Choice of formulation and equipment,
- Use of buffer zones



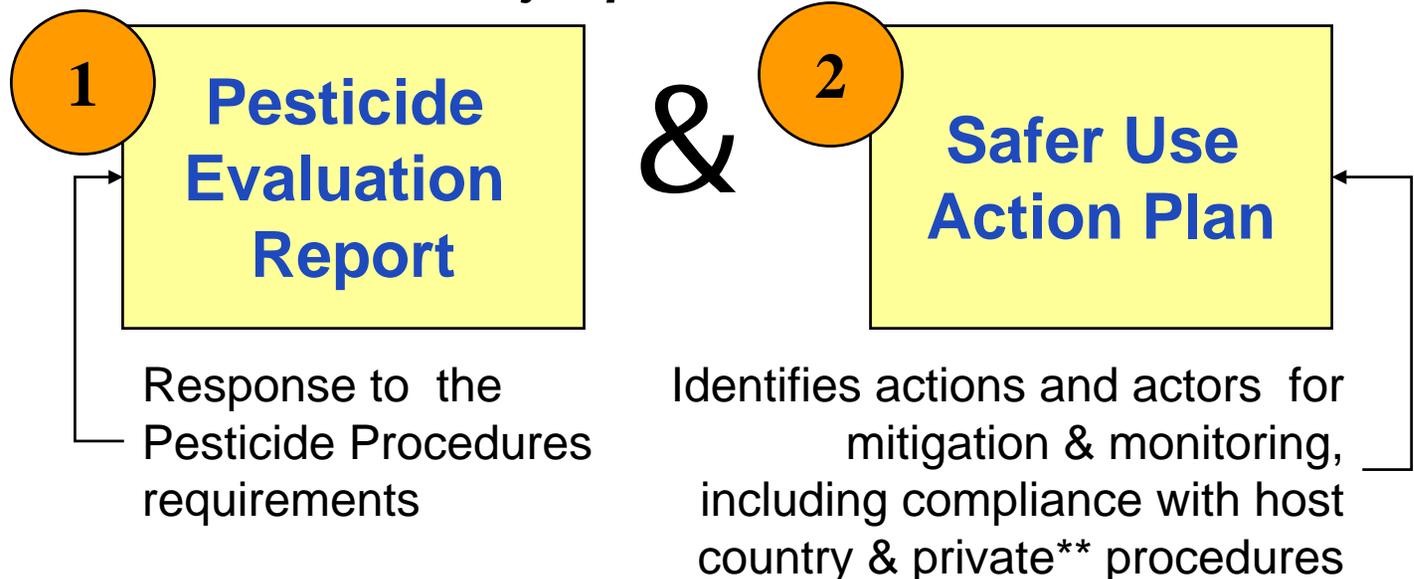
**All options
require training &
monitoring!**

What decision follows from the IEE?

- ❖ If pesticides are for “**same or similar uses**” as for general use USEPA registered products, the IEE can cover the proposed use(s).
- ❖ If the IEE finds that the pesticides proposed present a **significant hazard to the environment or human health** (i.e., a positive determination), an EA will be required.*
 - *Restricted Use Pesticides (RUPs) will result in such a determination*
- ❖ For small scale projects, this often means that support will be denied.

Pesticide Evaluation Report & Safer Use Action Plan (**PERSUAP**)

- ❖ Originated in the Africa Bureau, but increasingly being adopted elsewhere, the **PERSUAP** constitutes the pesticide analysis of the IEE*, or takes its place.
 - *The PERSUAP can be self-standing, be attached to the IEE, or submitted later to resolve a pesticide use deferral*
 - *PERSUAP has two major parts:*



Some key resources for PERSUAPs, IPM & safer use.

IPM, Safer Use & USEPA Pesticide Registration Status Resources

Pesticide Action Network Database
www.pesticideinfo.org

US EPA Office of Pesticide Programs
www.epa.gov/pesticides

CABI Crop Protection Compendium
www.cabi.org/compendia/cpc

Africa Bureau IPM and Pesticide Use Guidelines
www.encapafrika.org

How to prepare a PERSUAP

PERSUAP preparation guidance
ENCAP Website
www.encapafrika.org

✓ ***Also included in the Participants' Sourcebook!***