

## **PERSUAP**

A PERSUAP not only analyzes the Regulation 216.3 (b) pesticide procedures—the 12 elements; it is a systems analysis of the entire pesticide system in a country and project in order to better understand risk, risk reduction, and issues requiring extra attention.

All USAID activities are subject to evaluation via, at minimum, an Initial Environmental Examination (IEE). And because of risk concerns presented by pesticides, the USAID environmental regulations require that at least the 12 factors outlined in the Pesticide Procedures described in 22 CFR 216.3 (b)(1)(i) (a through l) be addressed in the IEE for any program that includes assistance for the procurement or use of pesticides. The ANE Bureau asks that these factors be examined in a particular type of document, termed a “Pesticide Evaluation Report and Safer Use Action Plan” (PERSUAP), which is submitted as an attachment to the IEE. (Note: the IEE itself can be very brief, with the analytical work contained in the attached PERSUAP.) The PERSUAP focuses on the particular circumstances of the program in question, the risk management choices available, and how a risk management plan would be implemented in the field. Further details about what to include in a PERSUAP are given below.

Why is a local-level assessment such as a PERSUAP needed for USAID pesticide programs? To help in understanding the utility, consider the U.S. system for promoting pesticide safety. When the USEPA registers pesticides for use in the United States, it specifies the manner in which the product can be “safely” used (i.e., with an acceptably small risk), including safety equipment needed when applying the pesticide, how to apply it, the allowed uses, etc. But the context in which EPA makes these registration decisions is important to note. An extensive system of capabilities and resources exist in this country that help give EPA confidence these specifications will be followed and the product will be used appropriately. These include a 97% literacy rate meaning most of the population can read labels; close control by EPA over the content of the label; training requirements and programs for those pesticide products that require applicator certification; worker protection requirements; occupational safety regulations; and relatively effective federal, state and local enforcement mechanisms. In allowing the use of certain pesticides in its Asia-Near East programs, USAID cannot rely on the same societal capabilities and resources that the USEPA does to assure appropriate use of the product. The preparation of a PERSUAP gives a program manager the opportunity to consider practical actions by which to reduce the risks of using pesticide products in a program, taking into consideration the context in which the products will be used, the particular elements of the program, and the different capacities of the partners involved.

Who prepares a PERSUAP?

Program managers are generally responsible for assuring that environmental review requirements for their programs are met, including PERSUAPs. As for all environmental reviews, guidance and assistance for PERSUAPs is available from the appropriate Mission Environmental Officer (MEO), Regional Environmental Officer (REO), the Africa Bureau Environmental Officer (BEO), or the BEO/DCHA if Title II (PL 480) funds are involved. Consultants with a strong background in entomology, plant pathology, weed science, IPM and pesticide toxicology are best prepared to understand the constraints sufficiently to deal with them effectively.

## Components of an activity-level PERSUAP

A PERSUAP basically consists of two parts, a “PER” and a “SUAP.” The Pesticide Evaluation Report (PER) section addresses the 12 informational elements required in the Agency’s Pesticide Procedures. The Safer Use Action Plan (SUAP) puts the conclusions reached in the PER into a plan of action, including assignment of responsibility to appropriate parties connected with the pesticide program.

A pesticide safe use action plan should:

- ❖ **Be programmatically linked to national pesticide registration and pest management programs**
- ❖ **Ensure formal national registration of pesticides**
  - Establish pesticide quality standards and control procedures
  - Provide for enforcement
  - Require good packaging and clear and adequate labeling
- ❖ **Define and assure safe use practices**
  - Identify pesticides appropriate for use, selecting the least toxic insecticides and formulations possible, and considering non-pesticide alternatives.
  - Define appropriate methods of pesticide handling, storage, transport, use and disposal.
- ❖ **Assure accessibility of protective clothing and equipment needed.**
  - Training, development and distribution of appropriate information, education and communication
  - Specific IEC messages, along with sale and treatment, regarding the proper handling, use, disposal of pesticides, and related waste, at the distribution, storage, handling, use, disposal stages, at all levels, but especially at the village and household levels.
- ❖ **Emphasize operational research & monitoring & evaluation:** Roles of key actors
  - Quality control of insecticide(s)
  - Research on alternative insecticides and effectiveness under local conditions
  - Mosquito susceptibility to insecticide(s) of choice
  - Safe and effective use of insecticide by parties at all levels
- ❖ **Identify Roles and Responsibilities:**
  - Public Sector: coordination, regulatory oversight and management, defining environmental responsibilities, and others
  - Commercial Private Sector
  - Non-profit private sector, PVOs, NGOs
- ❖ **Integrate Mitigation Measures,** for example:
  - Choice of USEPA-recommended pesticides
  - Avoid disposal of treatment solution in bodies of water
  - Avoid washing application equipment where the residues would impinge on bodies of water
  - For bulk pesticides, provisions for spill prevention and clean-up
- ❖ **Disposal provisions for used pesticide containers**

**Basic principle of risk reduction:** risk must be evaluated in the local conditions of the project or activity.

**1) Some common errors**

- Pesticide not registered in the host country
- Pesticide not evaluated/registered in the country of origin (OECD)
- Pesticide not efficacious for the planned use
- Formulation is not stable in tropical conditions
- Formulation not adapted for the available application equipment
- Quantities exceed the real need
- Pesticide is too dangerous for the users
- No label / in a foreign language
- Packaging of an inappropriate volume
- Packaging not strong enough

**2) Basic principles**

- Promote IPM as the preferred approach for pest control
- Reinforce the management of pesticides by the host country
- Use good practices in the provision of pesticides

**3) Constraints to IPM -- pesticides**

- Aggressive marketing of pesticides
- Policies of government/donors
- Governmental policies / donors promote the use of pesticides
- Economic/financial
- Institutional
- Centralized decision-making in favor of pesticides

**4) Possible responses**

- Put in place a project/program for plant protection/vector control
- Put in place IPM/IVM projects/programs

**5) Donation/purchase of pesticides**

**Stage 1 – phytosanitary problem analysis of the pest biology known?**

- Is the environment and are the farmer practices known?
- Is the pest impact known (financial loss)?

**Stage 2 – analysis of management options.**

- Has the pesticide efficacy been evaluated for the crop/pest and locality in question?
- Are agronomic/cultural measures known and applied?
- Is biological control possible?
- Has an IPM system been developed?

**Stage 3 – risk reduction**

- Risk = toxicity x exposure
- Minimize the risk of the pesticides used by:

- Reducing toxicity of choices
- Reducing the duration of exposure
- Reducing the degree of exposure

## 6) Risk reduction measures:

### Avoid use

- Avoid pesticide use, if possible.
- Avoid pesticide use as the only control option, if possible.
- Integrate pesticide use into an IPM system -- minimize the frequency and dose of applications
- Use pesticides as a last resort

### Toxicity reduction

- Use the least toxic commercial products available – basic principles:
- Products authorized? -- regulation.
- Products efficacious? -- regulation / research
- Products acceptable to users? -- extension / farmers' groups
- WHO acute toxicity classes:
  - Ia Extremely hazardous
  - Ib Highly hazardous
  - II Moderately hazardous
  - III Slightly hazardous
  - U Unlikely to present any acute hazard in normal use
- Lists of concern :
  - Products in WHO toxicity classes Ia, Ib (and II)
  - Products not registered in OECD countries
  - « PIC » or « POP » chemicals

## 7) Exposure reduction

Prior to use Transport, Packaging, Storage

- During use (« safer use »)
  - Training
  - Formulation
  - Equipment
  - Protective material
  - Buffer zones
- After use
  - Waiting period
  - Cleaning / bathing
  - Storage
  - Disposal
  - Monitoring