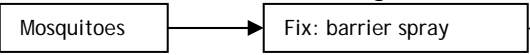


Systems Thinking in Mosquito-Borne Disease Prevention, Patricia Ferrao

- a) Definition
 - i) Understand reality
 - ii) Emphasize relationships
- b) Tools
 - i) Causal loop diagrams
 - (1) Visualize basic mechanisms
 - (2) Mosquito-borne disease system
 - (3) Helps to determine limiting forces
 - ii) Archetypes
 - (1) Behaviors
 - (2) Relationships between program and influencing forces
 - (3) Types
 - (a) Fixes that backfire – solution no longer works
 - (b) Example: 

```
graph LR; A[Mosquitoes] --> B[Fix: barrier spray]; B --> A;
```
 - (c) Shifting the burden
 - (d) Limited resources
 - (e) Accidental adversaries
 - i) Points to a need for education and cooperation
- c) Computer modeling
 - i) Mapping and modeling forces of change
 - ii) Overcome policy resistance
 - iii) Look for triggers
 - iv) Software - iThink
- d) Need to understand systems and interrelationships

Everyone wants to be sprayed, no one wants to help themselves = problem