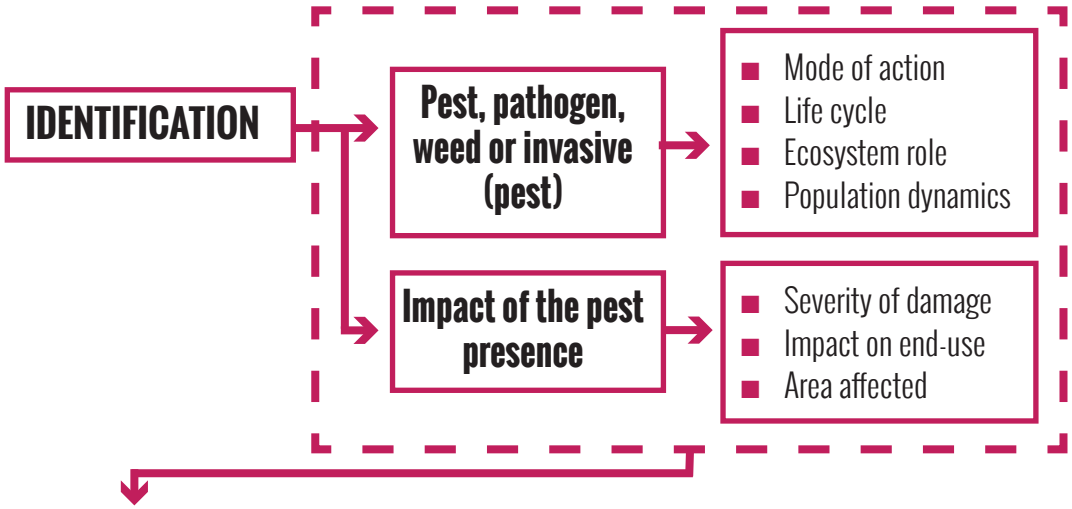
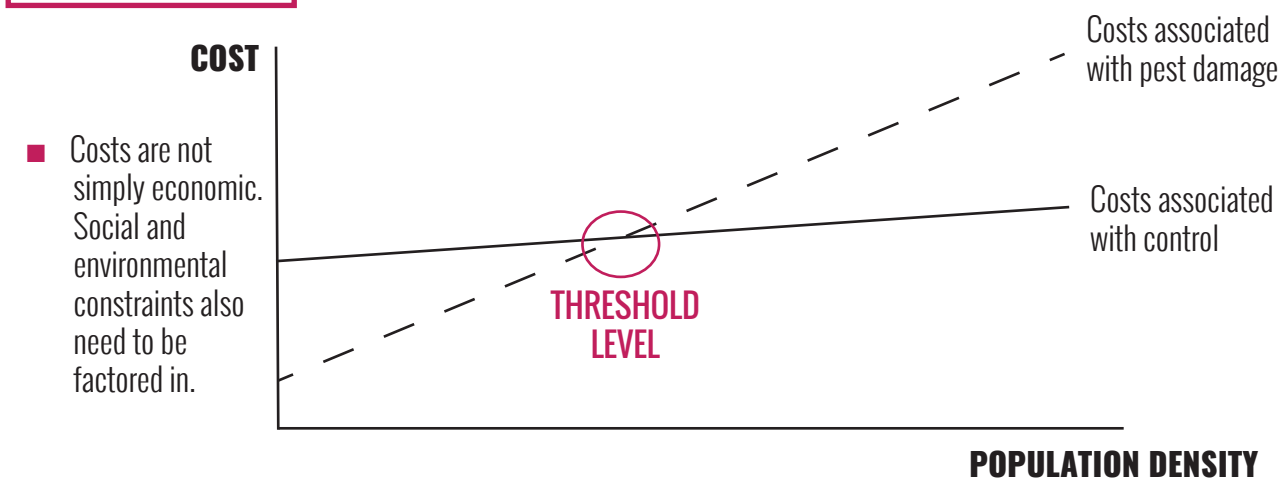
INTEGRATED PEST MANAGEMENT: THREE-STEP FRAMEWORK

1: IDENTIFYING AND QUANTIFYING THE PROBLEM

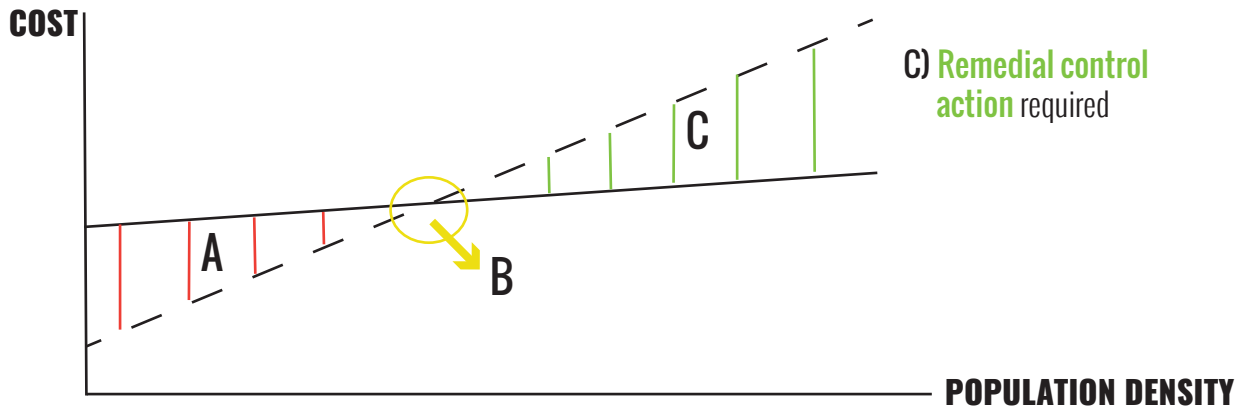


QUANTIFICATION



	PEST ASSOCIATED	CONTROL MEASURE ASSOCIATED
ECOMONIC ■ Direct ■ Indirect	■ Production loss ■ Impact on sector's and country's GDP ■ Associated employment implications	■ Cost of control measure, application etc. ■ Remediation costs associated with potential risk
ENVIRONMENTAL ■ Abiotic ■ Biotic	■ Impact of pest on neighbouring land users ■ Impact of pest on indigenous species	■ Impact of pest on neighbouring land users ■ Impact of pest on indigenous species
SOCIAL	■ Impact of lower forest productivity - employees and product end users ■ Impact of pest on forest users	■ Human health implication of control measures on operators, neighbours and other forest users

2: DECIDING TO TAKE ACTION



C) Remedial control action required

A) Take no control action - monitoring is still critical

B) Avoidance measures - proactively looking for solutions to prevent threshold levels being reached:

- Cheaper in long-term
- Fewer potentially damaging impacts

Includes:

- Altering silviculture practices
- Selective breeding for resistance
- Site-specific matching
- Optimising tree health and quality

3: REMEDIAL ACTION REQUIRED

TWO STEP PROCESS

In order to proceed to chemical control, there must be good evidence that non-chemical methods are impractical, ineffective, excessively costly or would cause more harm.

1) Non-chemical control

- Species selection:
  - Varieties with increased resistance
  - Site-specific matching
- Cultural controls - making the environment less attractive:
  - Mulching
  - Cultivating
  - Sanitary measures
  - Removal of alternative host species
- Biocontrol - the three P's
  - Predators
  - Parisitoids
  - Pathogens

2) Chemical control

Chemical control should be used in combination with all of the above to minimise the amount of chemicals required.
Refer to IPM: Chemical control