



Australian Government

Land & Water Australia

Department of the Environment,
Water, Heritage and the Arts

Pareto Analysis

March 2009

Description

Pareto analysis is a technique based on the Pareto Principle which states that 80 percent of problems or effects are produced by 20 percent of causes. This type of analysis can be useful in the scoping stage of decision making, to identify the root causes (or attributes) of the problem you are trying to address, and prioritise them.

Benefits

Pareto analysis is a formal technique for finding the changes that will give the biggest benefits. It is useful where many possible courses of action are competing for your attention.

Limitations

The quality of the analysis is dependent on the availability of relevant and reliable data.

Challenges

This technique relies on data that is additive (eg counts or costs). If you have not collected data, it is possible to use the technique by applying a weighting fact or score to each cause.

Prioritisation & Planning Tool

When to use

When identifying the likely causes of a problem and possible solutions

Other tools for similar situations

Force field analysis

Companion Tools

NRM practice change planning framework

What is required?

- ✓ **Skills** No specialised skills are required.
- ✓ **Resources** Staff time to compile and analyse the data. If conducted as a group, butchers paper or a whiteboard are useful.
- ✓— **Information** This analysis can be conducted in either a quantitative manner or qualitatively by brainstorming. Data on land uses, existing practices and resource condition can be useful.

✓ = LOW LEVEL

✓✓ = MEDIUM LEVEL

✓✓✓ = HIGH LEVEL



CLIENTS|PEOPLE|PERFORMANCE

GHD Hassall

Making Successful Investments in NRM Practice Change

A RESEARCH PROJECT FUNDED BY LAND & WATER AUSTRALIA, THE AUSTRALIAN GOVERNMENT AND PARTICIPATING REGIONAL NRM BODIES

Steps in conducting a Pareto Analysis

- 1 Compile a list of the causes of a problem.
- 2 Gather data on the frequency of these causes. If you have limited data, assign a relative weighting to each cause. Rank the causes from most to least frequent and calculate the cumulative percentage.
- 3 Draw a horizontal axis representing the different causes, ordered from most to least frequent.
- 4 Draw a vertical axis (0-100%).
- 5 Construct a bar graph of the percentage of each cause.
- 6 Construct a line graph of the cumulative percentage of each cause.
- 7 Draw a line from 80% on the Y axis to the line graph, and then project a line from this intersection to the x axis. This line separates important causes from the trivial ones.

For further information

This fact sheet is one of a series prepared for the Making Successful Investments in NRM Practice Change project.

For further fact sheets and information visit the NRM Practice Change website:

www.hassall.com.au/australian_division

CONTACT

GHD Hassall project team

Sue Salvin

EMAIL sue.salvin@ghd.com.au

PHONE 0409 114 418

Ingrid Roth

EMAIL ingrid.roth@ghd.com.au

PHONE 0428 195 485

Social and Institutional Research Program

Land & Water Australia

GPO Box 2182

Canberra ACT 2601

PHONE 02 6263 6000

EMAIL enquiries@lwa.gov.au

WEB www.lwa.gov.au/sirp

Published by Land & Water Australia © March 2009

► GPO Box 2182, Canberra ACT 2601

► L1, The Phoenix, 86 Northbourne Ave, Braddon ACT

► **Telephone** 02 6263 6000