

D8.1 Problem Tree Analysis – Procedure and Example

Problem tree analysis helps stakeholders to establish a realistic overview and awareness of the problem by identifying the fundamental causes and their most important effects. The main output of the exercise is a tree-shaped diagram in which the trunk represents the focal problem, the roots represent its causes and the branches its effects. Such a problem tree diagram creates a logical hierarchy of causes and effects and visualizes the links between them. It creates a summary picture of the existing negative situation.

This document explains how to develop a problem tree in 6 steps and gives practical hints. An example of a problem tree is provided for a hypothetical urban sanitation situation.

STEP-BY-STEP PROCEDURE OF A PROBLEM TREE ANALYSIS

The problem hierarchy is formed following these six main steps:

1. **Identify existing problems** within the problem area/domain of interest (brain storming)
 - A problem is not the absence of a solution, but an existing negative state or situation
 - Distinguish between existing, impossible, imaginary or future problems
2. **Define the core problem** (focal problem or central point of the overall problem).
3. **Formulate the causes** of the core problem
 - Consider that the problems identified in step 1 can also be causes of the core problem
4. **Formulate the effects** (consequences) of the core problem
 - Consider that the problems identified in step 1 can also be effects of the core problem
5. **Draw a diagram** (problem tree) that represents cause-effect relationships (problem hierarchy)
 - The focal problem is placed in the centre of the diagram, forming the trunk of the tree
 - Causes are placed below and effects above, in sub-dividing roots and branches (like a mind map)
 - If possible, all causes/effects of a problem should be on the same horizontal level (see example below)

6. **Review the logic and verify the diagram** as a whole with regard to validity and completeness. If necessary, make adjustments.

- o Question to ask for each problem: are these causes sufficient to explain why this occurs?

EXAMPLE OF A PROBLEM TREE

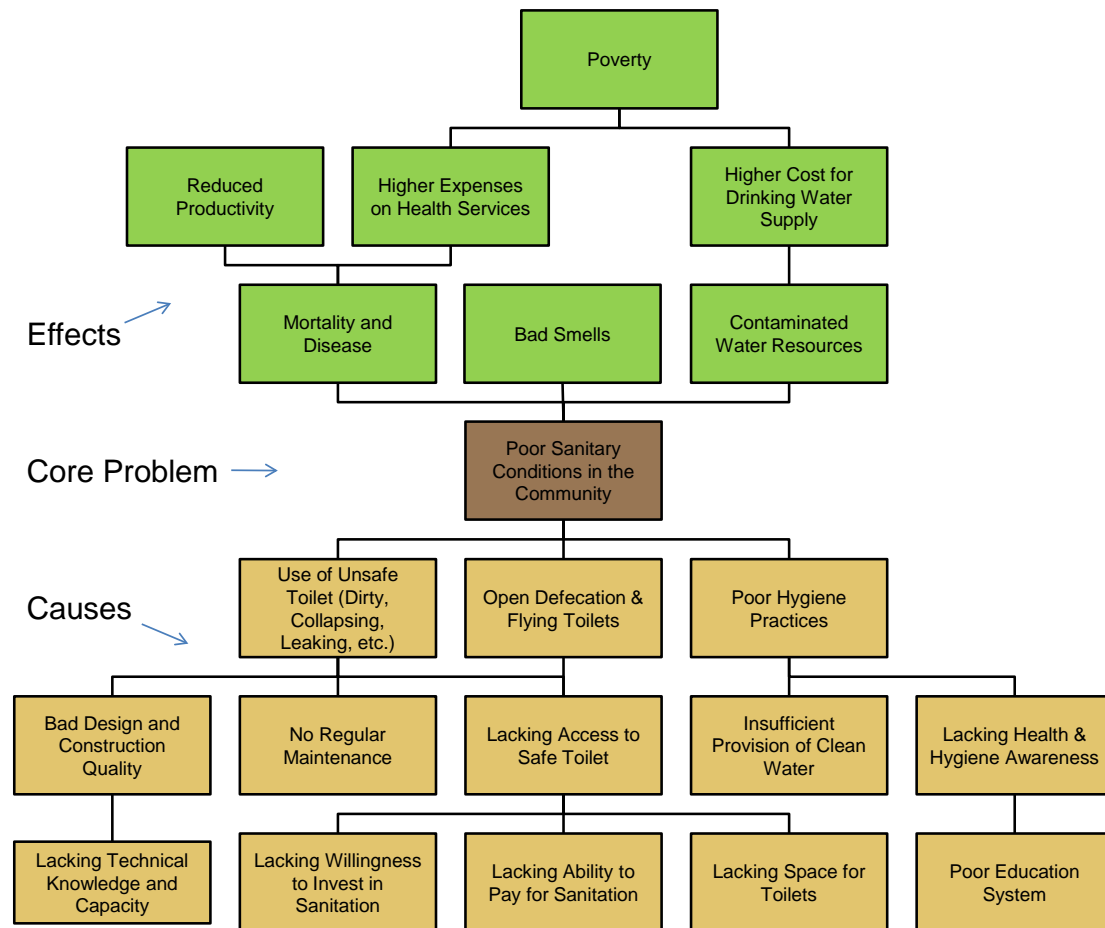


Figure 1: Hypothetical problem tree for a typical urban community with poor sanitary conditions. For the sake of clarity this representation has a limited level of detail. Not all potential causes and effects are shown.

GENERAL REMARKS AND PRACTICAL ADVICE

- Problem tree analysis is best undertaken in a workshop setting, where a variety of stakeholders are brought together. A good representation of stakeholders during the problem tree session is crucial to achieve a shared understanding of the issues. There may be considerable differences of opinion and perceptions between different stakeholders.
- Conducting a problem tree analysis calls for skilled facilitation as well as plenty of time.

- It is important that everyone feels comfortable in putting their point of view forward. In some cases it may be beneficial to break into smaller groups, each producing a separate tree and then compare results. This could be advisable, for example, where
 - o the group taking part in the exercise is large
 - o women may be less vocal in front of men
 - o the aim is to get a perspective from a particular group, such as young people.
- Useful materials are flip chart paper, markers, post-it notes or cards, and scotch tape or pins for displaying them. Writing each problem/cause/effect on a separate post-it note or card during the brainstorming session allows for later (re-)arranging in a cause-effect logic.
- Where cards are very similar create a single new card to represent them all.
- There will probably be multiple causes for each effect, and multiple effects for each cause. Some cards (such as poverty) may be both fundamental causes and principal effects – in this case use two cards for the same issue.
- The importance of a problem is not determined by its position in the problem tree
- Allow for discussion, debate and dialogue. A separate flip chart paper might be useful for solutions, concerns, decisions and other related ideas which result from the discussion. Questions to guide the discussion might include:
 - o Does this represent the reality? Are the economic, political and socio-cultural dimensions to the problem considered?
 - o Which causes and consequences are getting better, which are getting worse and which are staying the same?
 - o What are the most serious consequences? Which are of most concern? What criteria are important to us in thinking about a way forward?
 - o Which causes are easiest/most difficult to address? What possible solutions or options might there be? Where could a policy change help address a cause or consequence, or create a solution?
 - o What decisions have we made, and what actions have we agreed upon?
- Photograph the final problem tree or copy it carefully onto flip chart paper.
- Share a copy of the final problem tree with stakeholders

REFERENCES

DFID (2003). Tools for Development: A handbook for those engaged in development activity. Department for International Development (DFID). London, UK.

GTZ (1987). Zopp Flippchartabschriften. Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Eschborn, Germany.

GTZ (1991). Methods and Instruments for Project Planning and Implementation (Outlines). Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. Eschborn, Germany.

Hovland, I. (2005). Successful Communication: A Toolkit for Researchers and Civil Society Organisations. Overseas Development Institute (ODI). London, UK.

Moriarty, P., Batchelor, C., Abd-Alhadi F. T., Laban, P. and Fahmy, H. (2007). The EMPOWERS Approach to Water Governance: Guidelines, Methods and Tools. Inter-Islamic Network on Water Resources Development and Management (INWRDAM). Amman, Jordan.