

What is Problem Analysis?

A properly planned programme addressing the real needs of the beneficiaries is based on a correct and complete analysis of the existing situation. The existing situation should be interpreted according to the views, needs, interests and activities of the parties concerned as it is essential that all those involved accept the plans and are committed to implementing them.

Problem analysis is a participatory set of techniques which help to:

- Analyze the existing situation surrounding a given problem condition,
- Identify the major problems and the core problem of a situation as perceived by participants, from which it is possible to
- Establish a cause-effect hierarchy between problems
- Visualise the cause-effect relationships in a Problem Tree diagram

By giving those developing programmes and project a deeper understanding of a problem or situation identified and identifying related causes and effects, discussion can follow as to the most appropriate areas to focus on considering the strengths and weaknesses of those involved. That should then lead into discussions about how it relates to the work of others, which should be complimented with an analysis of the capacity and intentions of stakeholders together with the wider institutional context to ensure relevant and realistic choices can be made on which party does what.

When should a problem analysis be carried out?

Problem analysis is most commonly carried out during the planning stage of a programme/project. Problem tree analysis is of significant importance with regards to programme planning since it strongly influences the design of a possible programme. It is the basis and justification for a programme design.

How to do a problem analysis

Stage 1: Identify the 'problems'

Problem analysis works well as a facilitated discussion with a group of individuals as it can be done at many complementary levels e.g.

- A meeting, in which representatives of all parties concerned, including experts, discuss the same questions in a participatory way, often leading to an analysis, which is shared by all (e.g. Participatory Rural Appraisal).
- Interviews with representatives of concerned groups and organizations providing perceptions that exist within that particular group or organizations.
- Experts studies considering the situation

It is important that all participants get a chance to express the problems they experience and to determine whether the different groups of people perceive the problem in the same way; if not the problem should be reformulated or split.

For example, if the problem mentioned is 'our family income is not sufficient', for a woman it could mean that she cannot buy vegetables and meat, whereas for the man in the family this could mean that he is not satisfied with the cash available for investing in his business.

How to capture: Problem tree

A participatory and popular tool to help with this is the Problem Tree.

A problem tree diagram is a way of visualising the cause and effect relationships regarding a particular problem situation. In such a diagram the causes are presented at lower levels and the effects at upper levels. The core problem connects the two. Thus the analogy with a tree: the trunk represents the core problem, the roots are the causes, and the branches represent the effects. The more specific the causes, the more likely they are to lie at the lower levels of the tree diagram; however, the location of a problem on a tree diagram does not necessarily indicate its level of importance.

There is no one correct way of formulating a tree diagram. Different individuals or groups, given the same list of problems and causes, will normally organize them differently in a tree diagram. This is due to the different levels of knowledge and experience of each person, and the amount of time available for analysis. Given sufficient time and exhaustive discussion, however, different interdisciplinary teams are likely to produce very similar results. In general, the more complete the level of knowledge of the participants and the longer the time dedicated to analysis, the greater the likelihood of similarity in results.

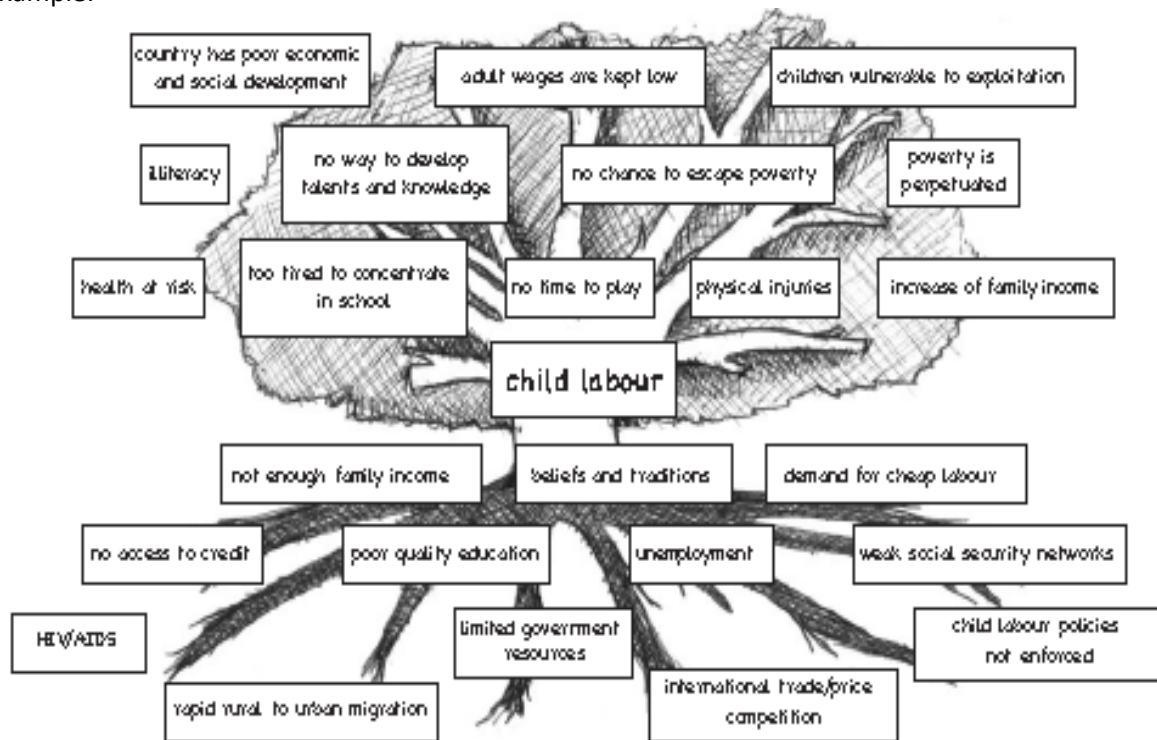
After a common understanding of all problems is reached, the analysis is presented in the form of a diagram, or problem tree. In a problem tree the relations and hierarchy among all identified problems is expressed. Each stated problem is preceded by what causes it, and followed by the impact of the problem. For example: the rice production is decreasing due to the irrigation water not reaching the fields and due to the fact that there is an irregular supply of inputs for rice production. The problem of a decreasing rice production itself contributes to the problem of food shortages.

Step 1: Draw a **tree trunk** on a large sheet of flip-chart paper. The trunk represents the problem or situation you are investigating.

Step 2: Add **roots** (suggest using post-its as can easily be rearranged). They represent the causes of the problem or situation. Some roots are closer to the surface: these are the more obvious factors that contribute to the problem. But what causes these factors? The deeper you go, the more causes you uncover that help to contribute to the problem or situation.

Step 3: Draw the **branches** (suggest using post-its as can easily be rearranged). These represent the effects of the problem. Some branches grow directly from the trunk: these are the problem's more immediate effects. But each branch may sprout many more branches, showing how the problem may contribute to a range of indirect and longer-term effects.

Example:



It helps to be precise and state clear problem e.g.

- There is no paved road from Chittoor to Mahabubnagar not there is no infrastructure
- The government does not issue licenses not the government is lazy
- School fees are not affordable not we don't have any money so the children don't go to school
- There is no knowledge of how to run an NGO not there aren't any NGOs.

Stage 2: Identify solutions

The 'Problem tree' then becomes the tool for helping to identify possible short- and long-term solutions/outcomes to the problems identified, otherwise known as a 'Solution tree'. This process of turning a problem tree into a solution tree includes:

- The translation of the negative situation in the problem tree into a realized positive state (the outcomes) for example, 'low rice production' is converted into 'improved rice production'.
- Confirmation of the hierarchy of outcomes
- Visualisation of the means-end relationships in a diagram

At this stage of the planning all options are considered and none rejected. Also in this step it is of importance that all stakeholders are involved. While transforming problems into outcomes and verifying the hierarchy, discussion and feedback on the outcomes is done. This helps building consensus amongst the stakeholders. It might also be necessary to reformulate some of the problems.

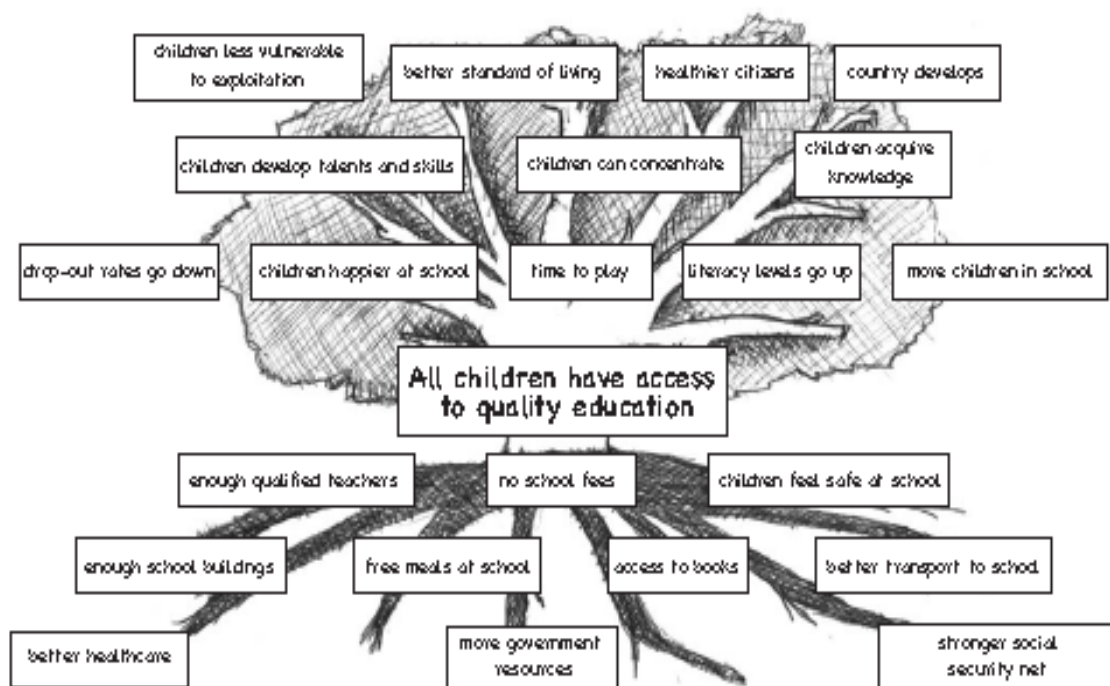
This tool can be used individually or for brainstorming with a group. You will need to have a problem tree (TOOL 1) already in place.

How to capture: Solution Tree

Step 1: Draw a **tree trunk** on a large sheet of flip-chart paper. The trunk represents what you would like a certain situation to be like in the future.

Step 2: Add **roots**. They represent possible solutions or methods to bring about the desired future situation. The solutions should relate to the main causes of the problem as indicated in the roots of your problem tree. The roots that are closer to the surface are those that would contribute most directly to improving the situation. The solutions may also reinforce each other.

Step 3: Draw the **branches**. These represent the effects of the improved situation. Some branches grow directly from the trunk: these are the more immediate effects. The longer branches are used to represent the longer-term effects of the improved situation.



Stage 3: Choose strategies

The 'Solution tree' then provides the information upon which to base discussions about possible intervention approaches could be used to address the issues identified. This is done by:

- 'Clustering' possible groups of outcomes, contributing towards a higher outcome.

In an outcome diagram, the different outcomes sharing the same nature can be considered a cluster. The clustering should be based on common sense and should be of practical value in the design stage. The clusters should be neither too broadly nor too narrowly defined. It concerns the identification and selection of potential alternative strategies to realize all or some of the outcomes. Clusters are made based on similarity of possible future activities, region or required expertise.

- Discussing strategy options and therefore identifying the scope of the programme.

Often the outcome tree shows many outcomes that all cannot be reached at once therefore choices will need to be made. Out of the clusters, one (and often more) will be chosen and used as the strategy to achieve a future desired situation: the goal of the intervention. This is called scoping, or choosing a strategy. Based on a number of criteria such as the priorities of the beneficiaries, and the limitations and possibilities of the implementing organization, the most relevant and feasible strategy is selected. Unrealistic outcomes should be excluded and outcomes that certainly should be included should be prioritized. The criteria have to be chosen and agreed upon by all stakeholders.

Examples of possible criteria are:

- Priorities of beneficiaries
- Expertise or experience of implementing organisation
- Contribution to the overall programme goal
- Inter-linkages between clusters
- Positive/negative side effects
- Sustainability
- Fit with mandate of implementing partner
- Donor policy
- Fit with mandate of government authorities, sectoral policies
- Duration of implementation urgency
- Contribution of different stakeholders
- Availability of human resources
- Availability of budget
- Shift in power relations
- Gender and social diversity aspects
- Likelihood of success

Example – Food Security

Possible problems relating to food [in]security were identified as:

- Food production on hills decreasing
- Ethnic clashes in neighbouring districts
- Food shortage
- High incidence of malnutrition
- Canals are blocked
- Rice production in low lands decreasing
- Poor maintenance of irrigation works
- Dikes are degraded
- Soil fertility on hill slopes is decreasing
- Soil erosion on hill slopes
- Irregular supply of inputs for rice production
- High immigration rates
- Irrigation water does not reach fields in desired quantity.

Diagram of problems

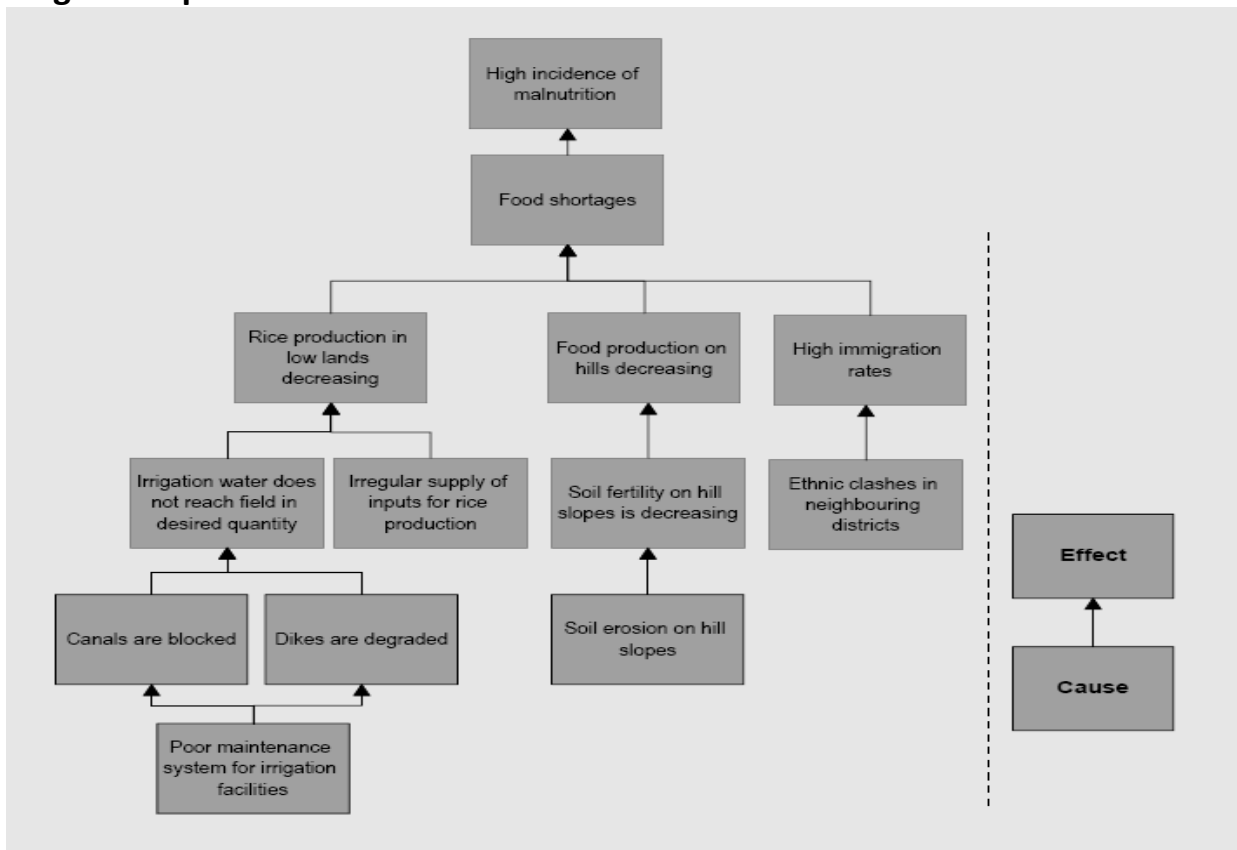
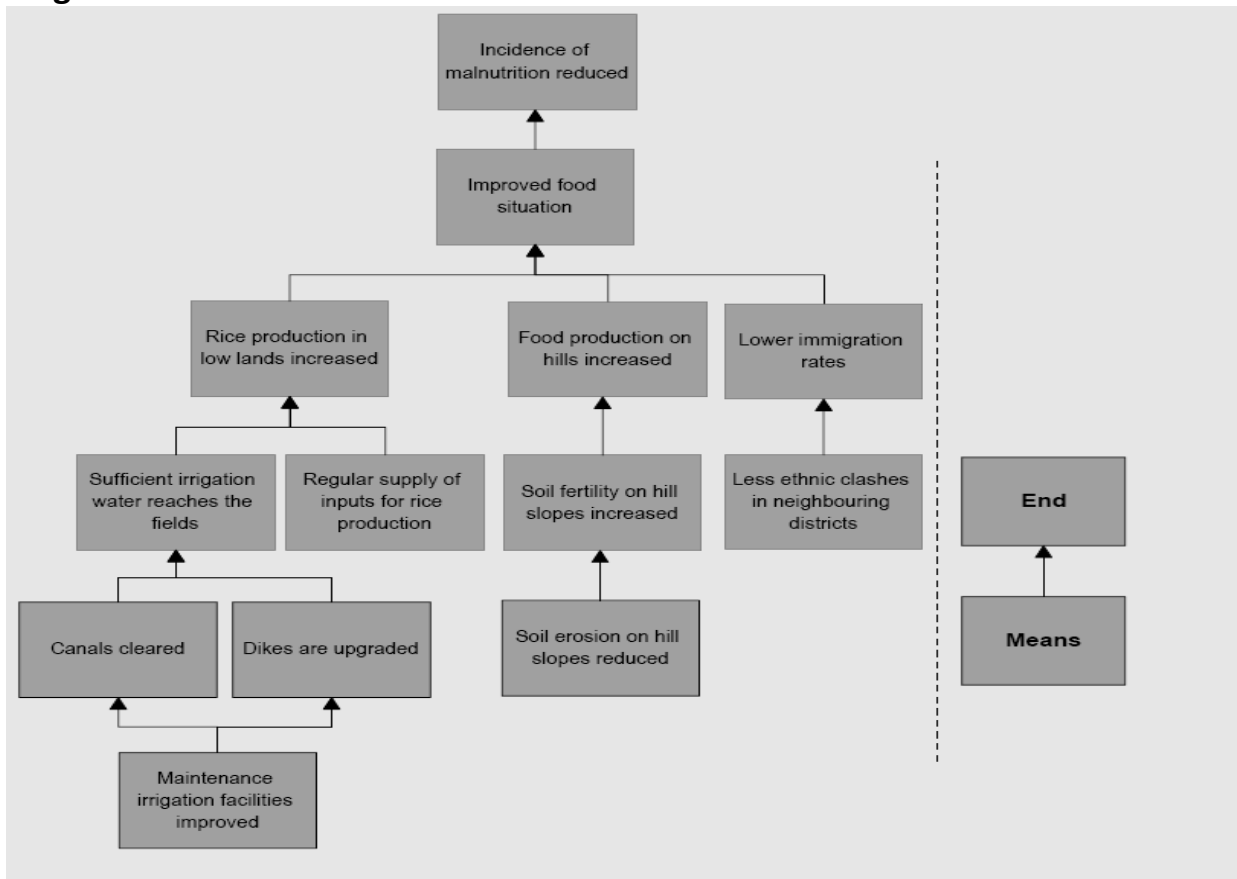
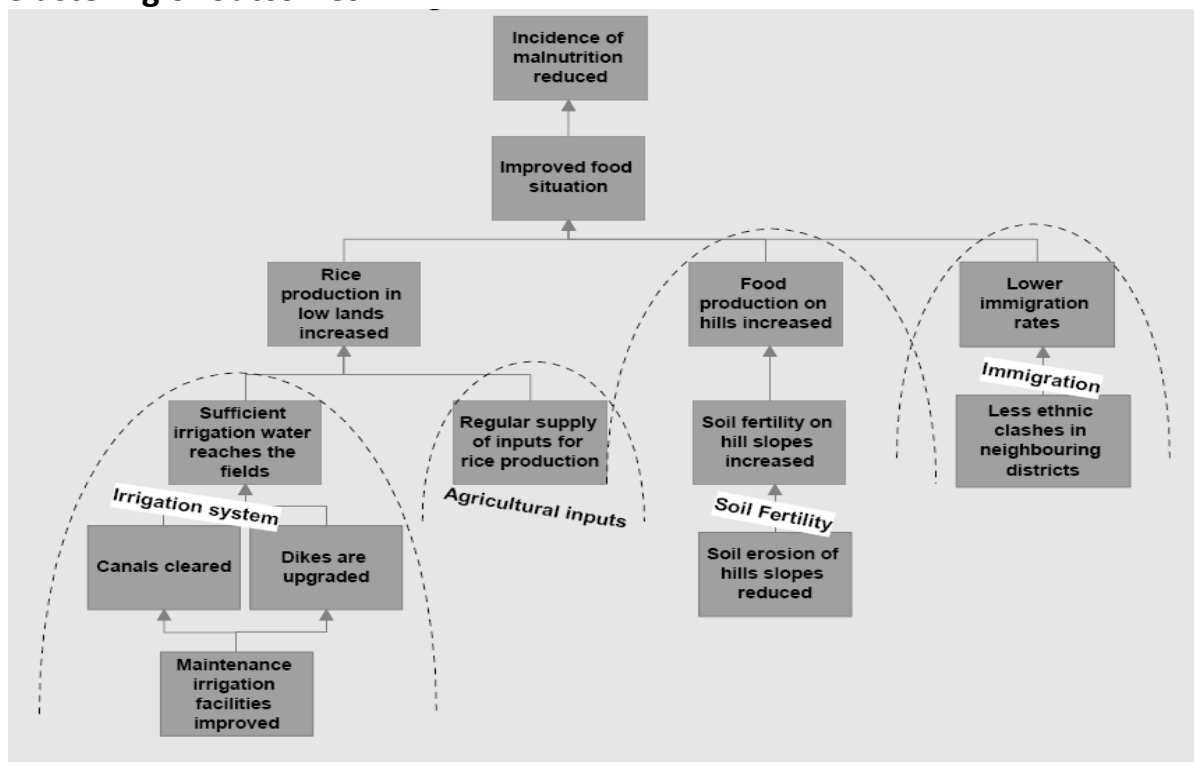


Diagram of outcomes



Clustering of outcomes



Scoping

By applying the criteria in selecting one or more clusters the following decisions were taken:

- *Irrigation system*: the beneficiaries indicate that this is a cluster that requires urgent intervention. Working on irrigation issues suits the policy of both the local government and the implementing agency. Besides the implementing organization has a vast experience in similar work.
- *Agricultural inputs*: in the workshop it was indicated that the suppliers of agricultural inputs intend to have a more regular supply, especially when the farmers are willing to pay a little more. When there will be sufficient water, the production will increase and thus the framers will have more income to invest in agricultural inputs
- *Soil fertility*: working on soil fertility issues requires a special expertise and it is known that the local government and the agricultural university run a successful project on soil fertility management
- *Immigration*: this is probably the most sensitive and difficult cluster to deal with. The beneficiaries and the implementation organization do not see any chance for them to try and work on this issue. It is typically a task for the politicians and government