Problem Analysis

What is a problem analysis?

Problem analysis is a way of understanding the context within which you intend to work. It helps you to identify what the key issues are and where you might best apply your resources to achieve the most impact. Through problem analysis you will develop a better understanding of the dynamics of a situation and what may be driving or sustaining it; this type of analysis can also tease out more positive influences that might help turn around a situation. By analysing the issue you can also identify underlying assumptions which can help you to develop the logframe and manage project risk. Problem analysis is an essential precursor to developing a theory of change and is therefore critical for effective monitoring, evaluation and learning.

When to conduct problem analysis?

Problem analysis forms part of the logical foundation of any project and therefore needs to be incorporated from the start. It should therefore form part of the original project design process. It can be used to inform a concept note, influence the development of project plans and documentation and will form part of the project baseline. Although conducted at the very beginning of a project, it should be reviewed regularly a understanding evolves throughout the life of an intervention; certainly as part of any mid-term review. Reflecting on the problem analysis is also part of any final evaluation so that lessons can be identified to inform future work.

Who should take part?

It is wise to be as inclusive as possible when conducting a problem analysis, but recognise that doing so is likely to add time and complexity to the analysis process; inevitably a compromises tend to be made. In-country staff should be an essential part of any analysis team as those outside the country are unlikely to have the same understanding of the dynamics as those inside. As the analysis forms part of the foundation of the project it is similarly important to include any partners in the analysis alongside anyone on whose contribution success will depend. Unless such analysis is done collaboratively there is a risk that different partners will form a different view of the issue and its dynamics. This can then create tensions during implementation as different people begin to pull in different directions based on their different understandings. Bringing different perspectives together as part of the analysis also

leads to a much richer understanding and ultimately to a better informed and more effective project.

How to conduct a problem analysis

Problem analysis is probably best done as part of a group brainstorming session. There are a number of tools that can be used. Perhaps one of the most common is a 'Problem Tree' although other tools such as '5 Whys' (probably the most irritating tool but useful nevertheless!), 'Influence Diagrams', 'Systems Diagrams' and 'Force Field Analysis' can also be extremely useful.

Problem Trees

A problem tree analysis helps to identify the causes and consequences (effects) of a problematic situation that you want to change. This tool reveals the complexity of the situation and identifies other factors that may need to be tackled by complementary projects in order for your intervention to be successful. Problem tree analysis is best undertaken in a workshop setting, where a variety of stakeholders are brought together to analyse the existing situation.

Start by identifying the main problem (central issue) by brainstorming ideas. It's important to identify existing problems, not possible, imagined or future ones. Here, a
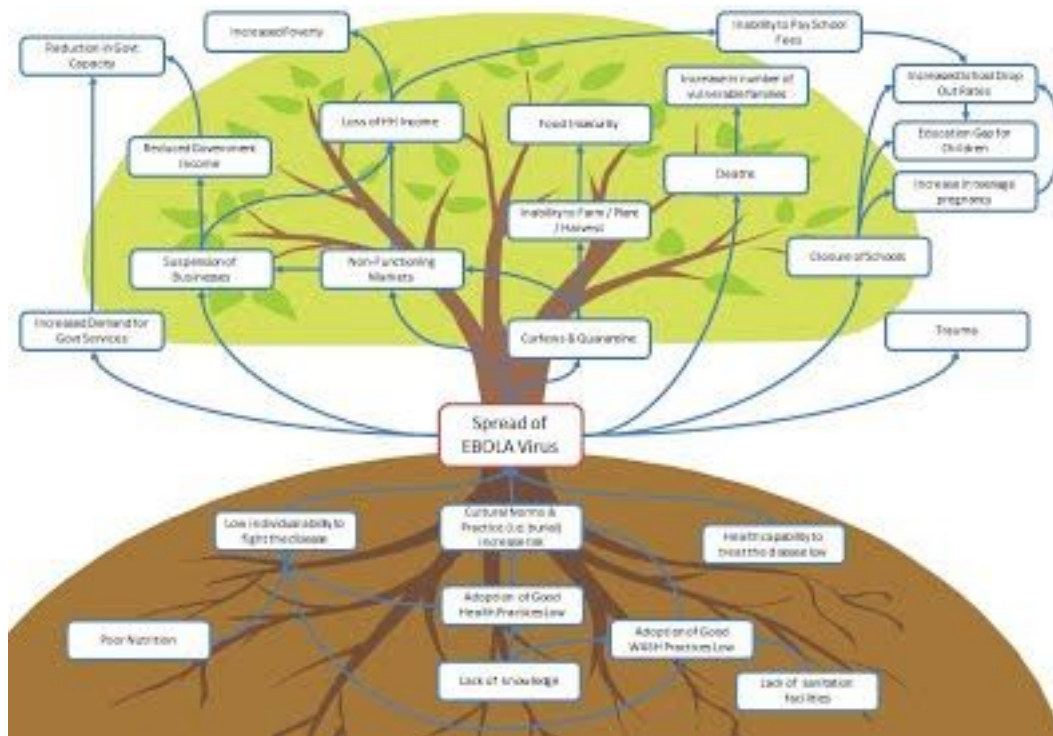
'problem' is the description of an existing negative situation such as 'crops are infested with pests' rather than the absence or a lack of something e.g. 'no pesticides available'. If no consensus can be achieved on the central issue then decide temporarily on one, continue the analysis but return at a later stage to investigate the other options. It's best to just make a start and not worry too much about whether you have selected the right central issue.

Next, populate the tree by identifying the causes and consequences of the focal problem. Write these on post-its or cards so that, after all the contributions have been gathered, they can be arranged in a cause-and-effect logic. This can be done realistically, in which case the roots represent the root causes of the problem and the branches represent the consequences of the problem. Like real roots and branches they divide and divide again as you identify further causes and consequences. We advise to go for between 3 to 5 levels of analysis. Less than 3 and you are not getting to the real underlying issues and more than 5 and you are likely to end up with something too unwieldy. Often the same issue will appear as both a cause and a consequence, this is fine as it starts to reveal circular dynamics at play.

Once a problem tree has been completed you can then ask questions such as: does this represent the reality? What are the most serious consequences? Which causes are easiest/most difficult to address? What possible solutions might there be? Where could a policy change help address a cause or consequence, or create a solution? You should be able to 'Read' a completed problem tree. Start at the central issue and work upwards following a branch - you should be able to say *'[central issue] leads to [next box] which leads to [next box] which leads to…'* until you get to the end of the branch. If what you are saying makes sense then your logic is probably sound. Similarly, you can work downwards from the central issue saying; *'[central issue] which is caused by [next box] which is caused by [next box] which is caused by…'.* As before this should make sense.
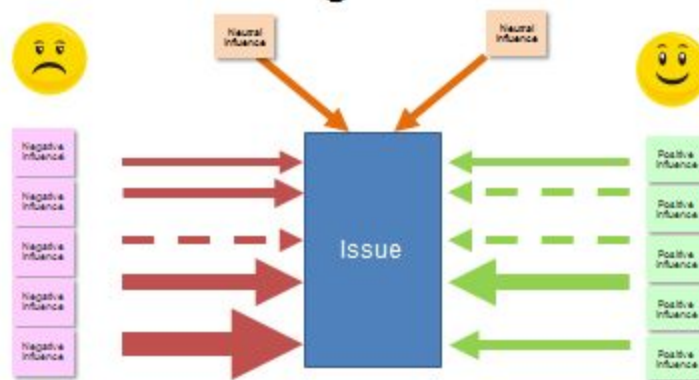
A problem tree can be turned into a 'solutions tree' - also called an 'objectives tree'. This is done by rephrasing all the elements of the problem tree into positive desirable conditions - as if the problem had already been solved. Start at the top and re-word the problems making them into solutions (or objectives). Some post-its or cards may be difficult to re-word so in this instance you can write a replacement objective. It's important to check that meeting objectives at one level will be sufficient to achieve the objectives at the next level. In this way root causes and consequences are turned into root solutions, and key project or influencing entry points are quickly established.

Force Field Diagrams

A [force field diagram](#) is a good way of visualising the forces (drivers and sustainers) that are acting on a situation. By drawing them out you can then begin to explore ways of changing the balance of forces so that you begin to create the change that you are looking for.

To create a force field diagram, identify the issue that you want to consider and write this on a large piece of card or post-it (it could even be a box!). With a group of people, brainstorm all the things that you think are acting on that situation. These could be cultural issues, political drivers, trade or economic issues, policies or legal frameworks, people, the physical environment - a whole host of possibilities will exist. A PESTLE (Political, Economic, Social, Technological, Legal, Environmental) analysis can be used to help reveal some of these.

Arrange the resulting post-its or cards on either side of the issue. Move those that tend to push the issue in the direction you would like it to go on one side and those opposing your preferred outcome on the other. If you're uncertain, place them either above or below the issue. Next, consider the strength of the force - how powerfully does it impact

on the issue under consideration? Draw arrows from this post-it towards the issue making the thickness or size of the arrow to represent the relative strength of the forces acting upon the issue.This represents the status quo - the situation as it is today.

Look into the future - are there events coming up that might create new forces, positive or negative? Add these to the diagram but use dotted lines to show that they are not yet in existence.

When thinking about forces, bring to mind the man pushing the box across the floor. All seemed straightforward but there were forces lurking that weren't apparent until he started trying to push the box. It was only at that moment that the forces of friction were revealed. In just the same way some forces won't appear until you start trying to create change, ask yourself what these forces might be and add them to the diagram.

Once you have done this look at the balance of forces and ask yourself four questions. Within the time and resources that I have available or that I can realistically expect to have:
- Can I turn any of these forces around?
- Can I reduce the strength of any negative forces?
- Can I increase the strength of any positive forces?
- Are there any other forces that I can bring to bear?

If the answer to any of these questions is yes then these might become objectives of any project or programme that you want to create to address the issue.

Timelines

Timelines are not perhaps the tool that immediately come to mind when thinking of problem analysis. However, they can provide some real insights into the forces present and the impact that they have, particularly if produced collaboratively with those in the context that you are seeking to change.
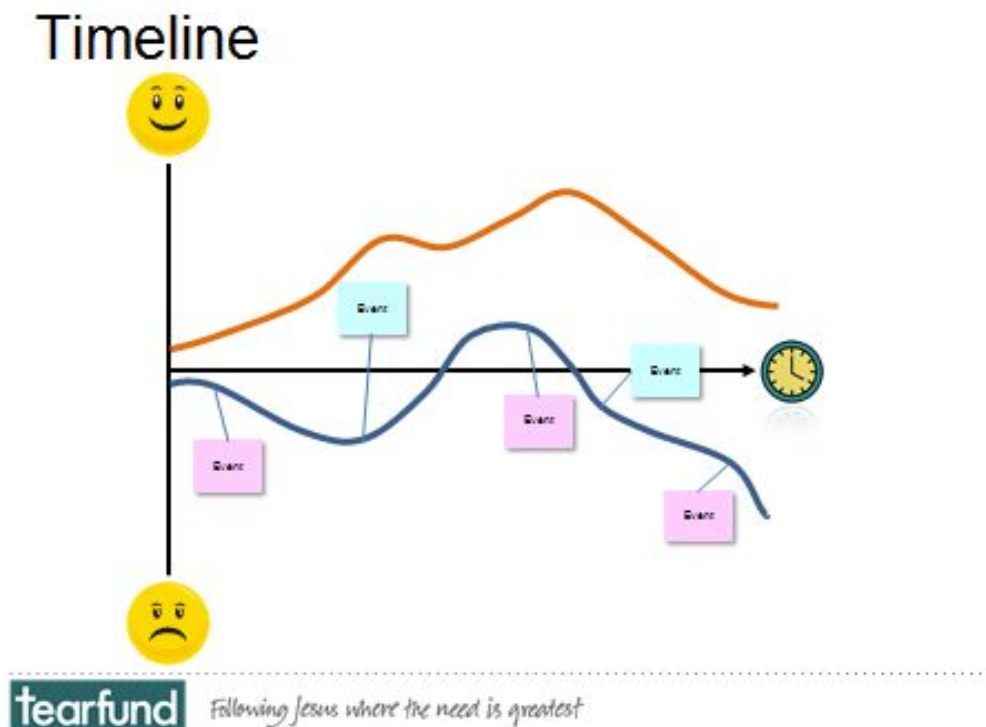
Draw a plus sign (make the horizontal bit longer than the vertical). The vertical axis represents the community's view of their situation - good and bad, better and worse. The horizontal axis represents time. Ask the community to identify where on the axis they think they are at the moment. Once they have done this get them to think back to a previous time, this could be a month, a season, a year or a decade, whichever they choose depends on what you are trying to understand – pick one that makes sense. Get them to mark where they think they were on the vertical axis then. Don't just go into the past but also get them to think about the future and forecast where they think they might be. If you then connect up the marks you will probably end up with a diagram that looks something like the one above.

Though interesting, this does not yet provide much insight. This comes when you look for points where the curve changes direction. Identify these points and then ask what happened to create that change - why at that particular moment did the situation begin to get better or get worse? The answers to these questions will help you to understand how change happens in that context and what forces seem to be able to create change – both positive and negative change. Timelines can be used as part of the identification part of generating a force field diagram.

DVAC

In thinking about bringing about change the following equation (**DVAC**) is worth thinking through:

$$D \times V \times A > C$$

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Where:
- D is the level of dissatisfaction with the current situation.
- V is the vision for the future
- A is the list of actionable steps to bring about change and
- C is the cost of change.

6 Thinking Hats

De Bono's 6 Thinking Hats is a helpful technique used to look at situations from a number of different perspectives. This forces you to move outside of your usual thinking style, and helps you to get a more rounded and complete view of a situation. This tool

was created by Edward de Bono in his book '6 Thinking Hats' where each hat represents a different style of thinking.
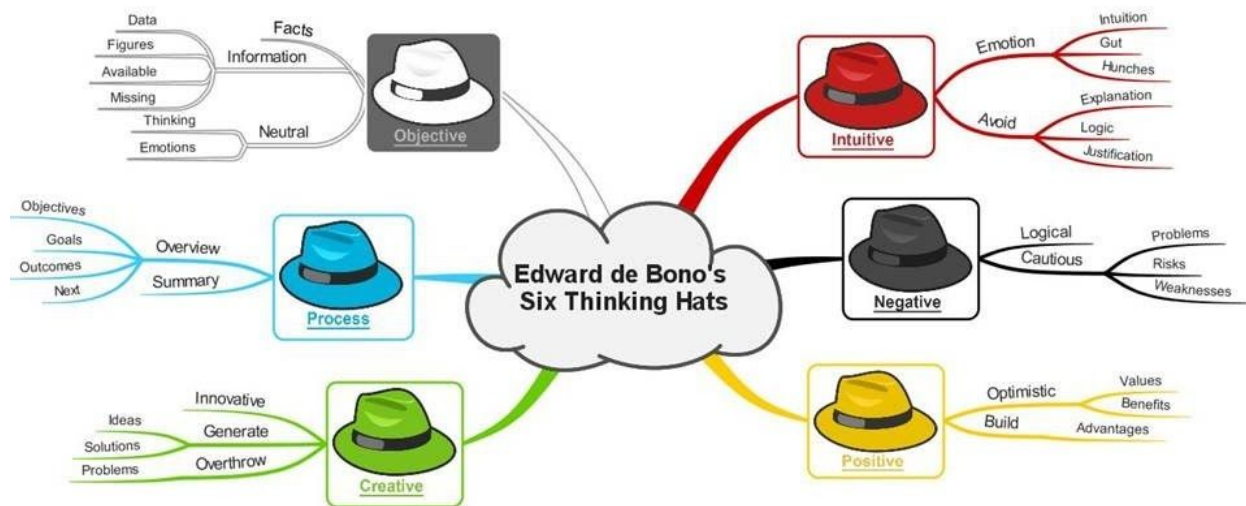
You can use '6 Thinking Hats' in a large group with stakeholders or even on your own. In groups it has the benefit of preventing the confrontations that sometimes happen when people with different thinking styles discuss the same problem. It also gives permission for people to speak freely and without judgement which can be liberating for people whose voice sometimes does not get heard. It can also ensure that all elements of an issue are surfaced, the good and the bad, the visionary and the practical, objective and subjective.

The hats are:

■   White Hat: With this thinking hat you focus on the data available. Look at the information you have, and see what you can learn from it. Look for gaps in your knowledge, and either try to fill them or take account of them. This is where you analyse past trends, and try to extrapolate from historical data.

■   Red Hat: 'Wearing' the red hat, you look at problems using intuition, gut reaction, and emotion. What excites you? What are you scared about? Also try to think how other people will react emotionally. Try to understand the responses of people who do not fully know your reasoning.

■   Black Hat: Look at all the negative aspects. Look at it cautiously and defensively. Try to see why it might not work. This is important because it highlights the weak points in a plan. It allows you to eliminate them, alter them, or prepare contingency plans to counter them. Black Hat thinking helps to make your plans 'tougher' and more resilient. It can also help you to spot fatal flaws and risks before you embark on a course of action. Black Hat thinking is one of

the real benefits of this technique, as when we are excited about a project/programme sometimes we often cannot see problems in advance. This leaves us under-prepared for difficulties.

- ■ Yellow Hat: The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it. Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.
- ■ Green Hat: The Green Hat stands for creativity. This is where you can develop creative solutions to a problem. It is a free way of thinking, in which there is little criticism of ideas.
- ■ Blue Hat: The Blue Hat stands for control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into Green Hat thinking. When contingency plans are needed, they will ask for Black Hat thinking, etc.

Rich Pictures

'**Rich Pictures**' is a useful, unstructured tool that can provide an understanding of the current situation. It is particularly useful for brainstorming all the relevant factors in an unconstrained way. It is also an opportunity to think laterally about an issue and illustrate relevant causes and effects. Most usefully, in terms of a situation analysis, it can help you identify areas for further investigation. The idea is to provide a visual representation of the complexity of a situation in all its richness to start the process of thinking about possible action. Rich pictures often identify key issues, stakeholders and linkages. You can use any type of imagery and accompanying text that you think is appropriate and sketch the rich picture to show the various dimensions of your interest as you visualise it. After completing your picture, it is helpful to list two or three key themes that have emerged from your drawing which you think would be of interest for further investigation. Your rich picture can be shared with others to provoke further discussion. Alternatively, the exercise can be done in groups where participants discuss and agree the rich details of a situation. Below is an example of a rich picture from a HIV prevention project in Summertown, South Africa.
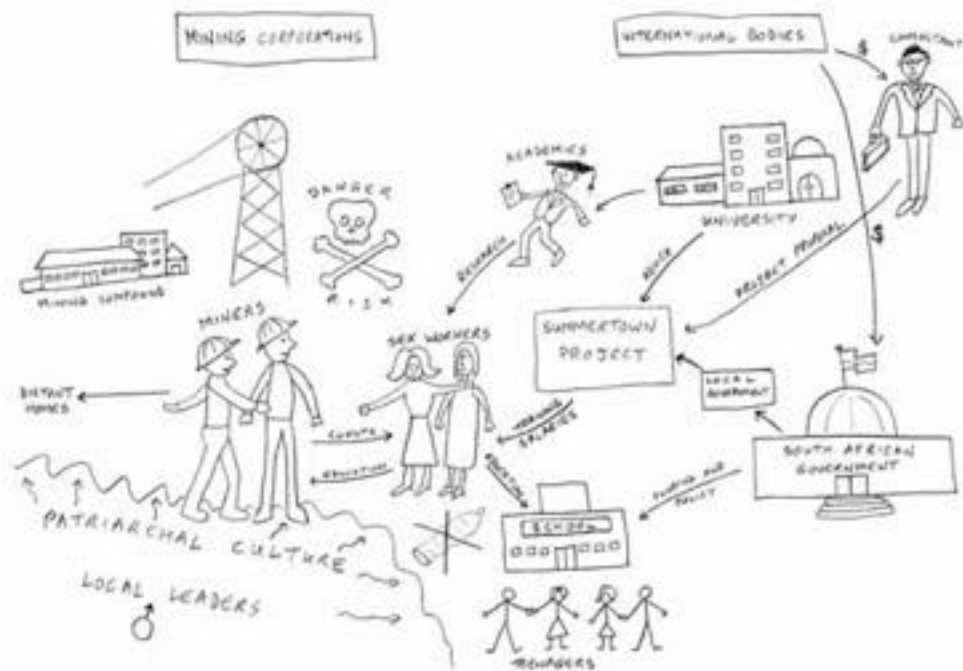
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In the picture you can see the Summertown Project in the centre as it plays a key role in linking all the stakeholders together. On the left-hand side is the Summertown locality with the mines, miners, traditional leaders and sex workers. On the right-hand side are the official bodies such as local and national government, schools and the university. At the top are a set of important, but less immediately visible global actors including mining corporations and agencies involved in HIV and AIDS policy. Relationships are indicated with arrows, with the arrowheads showing the direction of influence. For example, the South African Government has a powerful role in funding and determining policy within local government so the arrow was one-way. Where the relationship is more reciprocal the arrows are two-way. The nature of the relationships are also to be labelled, e.g. 'policy', 'culture'.

From this you might start to consider areas for further investigation. For example, you may want to know more about what role local government plays (or could play) in altering the values and organisations of the local leaders, who seem central to how gender and power relations are enacted. You might also want to understand more about where the miners come from and what pressures they face from home.

SWOT/SWOC

| Strengths	Weaknesses
• Good reputation with denominational leaders • …	• History of only working with members of own denomination
Opportunities	**Threats**
• Church denomination has a local presence across the whole country	• Being presented as being partial, favouring our own above those in greater need • …

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The SWOT/SWOC technique is, at its simplest, a list of the strengths, weaknesses, opportunities and threats/constraints facing an organisation or group. It is often used to assess the current situation by addressing the question: 'where are you now?' But it can also be used to analyse a future plan. Where there are alternative proposals, it can be used to investigate and display the arguments for and against each idea. This tool is often applied to group analysis of a given situation and the SWOT/SWOC provides a framework that can encourage input from many people. It provides an organised way for people to list potential solutions (opportunities) and constraints or threats. It is also a way of gathering information that can be useful in problem analysis, monitoring and evaluation. The idea is simply to brainstorm under the following headings:

- **Strengths**: those things that have worked (things that you are proud to say about the project/situation/activities).
- **Weaknesses**: those things that have not worked so well (times when things could have gone better).
- **Opportunities**: ideas on how to overcome weaknesses and build on strengths.

- Threats/constraints: the constraints that exist which reduce the range of opportunities for change.

Using this SWOT/SWOC approach can help to generate shared understandings of the situation where possible, and when not possible, of participants' individual perspectives. Another strength of the tool is that it enables a distinction to be made between the internal factors (strengths and weaknesses) and external factors (opportunities and threats) in a given situation.

Fishbone Diagrams
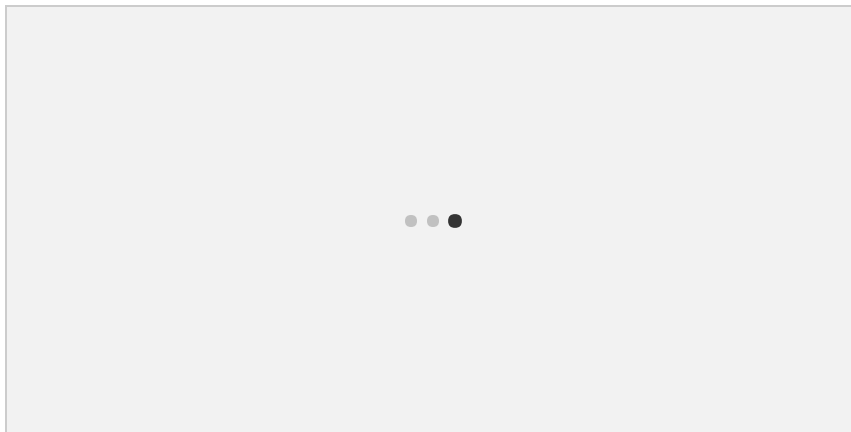
A Fishbone Diagram (also called a 'cause and effect diagram') is similar to the problem tree in that it helps to identify many possible causes for a specific situation or problem. It can be used to structure a brainstorming session and is particularly useful as it immediately sorts ideas into helpful categories.
The steps to using a fishbone diagram are:

- Agree on a problem statement (this is the effect). Write it at the centre right of the flipchart or whiteboard. Draw a box around it and draw a horizontal arrow running to it. This is the head and spine of the fish - see example structure below.

Fishbone Diagram
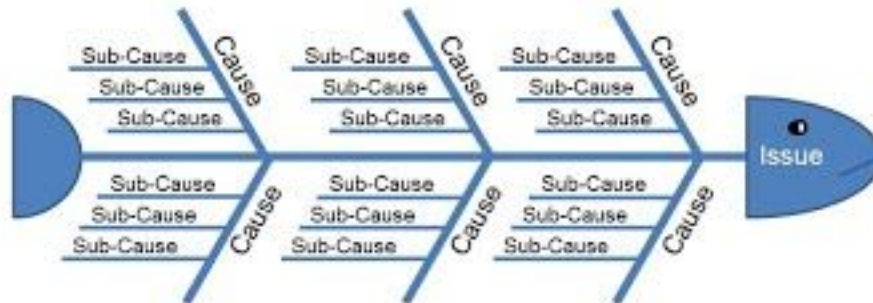
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- ■ Brainstorm the major causes of the problem. At the end of this step you should have a good list of possible main causes. These should then be clarified and grouped. Write the main causes as 'bones' leading from the spine. When brainstorming it is helpful to remember the advice shown in the box.

- ■ Discuss the major causes in more detail in order to identify all contributing factors. Ask 'why does this happen?' and write the answer as a sub–cause branching off the main cause. Continue to ask 'why does that happen?' and generate deeper levels of causes. This often indicates causal relationships and helps get you to the true forces sustaining the problem.

- ■ When the group runs out of ideas, focus attention to places on the diagram where ideas are few.

Organising the ideas from the group session in a fishbone diagram gives you the ability to see linkages, relationships and patterns. This may reveal the most likely root cause of the problem or often reveal unexpected causes that need to be addressed.

Stakeholder Analysis

Stakeholders are individuals, groups of people or organisations who have a direct or indirect involvement or interest in your activities. Stakeholder influence on your activities can be positive or negative. In most cases stakeholders fall into one or more of the following categories: international actors (e.g. donors); national or political actors (e.g. legislators, governors); public sector agencies; interest groups; commercial/private for-profit organisations; non-profit organisations; civil society members, and users/beneficiaries. There are 3 steps to a stakeholder analysis:

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- Step 1: Identify the key stakeholders who may be affected by or who may have an influence on your activities. When thinking about the different types of stakeholders it is important to be as specific as possible so avoid using terms like 'beneficiaries', 'community' or 'local government'. It is better to think about specific groups or individuals - for example people with disabilities, village elders or the local government health department. It is also useful to distinguish between primary and secondary stakeholders. Some of the key questions to consider include: who might be adversely affected? Who has existing rights/access? Who is likely to be voiceless? Who is likely to resent change and mobilise resistance against it? Who has money, skills or key information? Whose behaviour has to change for success?

Stakeholder Analysis

Stakeholder	Position	Interest	Need	Influence	Interest
Primary					
Married men	Girls should not be educated	Preventing girls' virtue from being threatened	Reassurance that girls will be protected at school	High	High
Older Women	Girls should not be educated	Concern over their own status in the family	Opportunity for them to learn as well	Medium	Medium
Religious Leaders	Girls should not be educated	Desire to remain true to religious teachings	Confirmation from respected religious leaders that education for girls does not compromise their faith	High	Medium

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- **Step 2:** Consider the position, interest, needs and influence for each specific stakeholder. At this stage it is particularly important that stakeholders have the opportunity to express their own concerns. Questions for each stakeholder group include: what are the stakeholder's experiences or expectations of Tearfund? What benefits and costs have there been, or are there likely to be, for the stakeholder? What stakeholder interests conflict with the goals of Tearfund? What resources have the stakeholder mobilised, or are willing to mobilise? The idea here is to get a much richer and better understanding of each stakeholder. This often reveals some common ground, such as similar needs, where previously there did not seem to be any opportunity for partnership. This step may also reveal an influential stakeholder who you will need to win over to change their position. It is important to remember that many interests are difficult to define - they may be hidden, multiple, or in contradiction with the stated aims or objectives of the organisations to which stakeholders belong.

Stakeholder Map
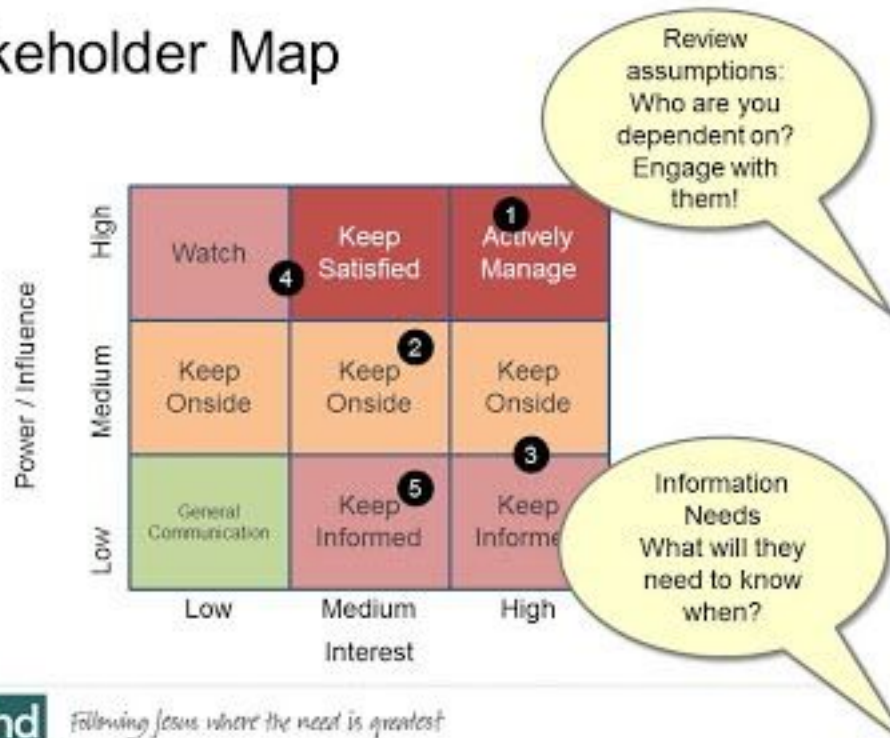
- **Step 3:** Assess how to manage and engage with stakeholders. This can be done by using a stakeholder influence matrix where you plot their position according to their level of influence and interest. You only have a finite amount of time available so it's best to be smart about how you engage with stakeholders. Identify who are the powerful stakeholders with a high interest in your activities and actively engage with them! Those with less power and interest you can devote less time to. Remember that stakeholder influence and interest can change so, as with many of these tools, it is good practice to use them again during the project/programme.

5 Whys

By repeatedly asking the question 'why?' (use five as a rule of thumb), you can peel away the layers of an issue - just like the layers of an onion - which can lead you to the root cause of a problem. It is one of the simplest analysis tools as it's easy to complete. It's also easy to learn and apply. You may need to ask 'why?' more or less than five times before you get to the root cause of a problem.

The real key is to avoid assumptions and encourage participants to keep drilling down to the real root cause of an issue. It works best when you quickly identify the source of an issue or problem so you can then focus resources in the correct areas, ensuring that you are tackling the true cause of the issue, not just its symptoms.

How to complete the five whys:
■ Write down the specific problem. Writing it down helps you formalise the problem and describe it accurately. It also helps a team focus on the same problem.
■ Use brainstorming to ask why the problem occurs in that instance, write the answer down below.
■ If this answer doesn't identify the source of the problem, ask 'why?' again and write that answer down.
■ Loop back to step three until the team agrees that they have identified the problem's root cause. Again, this may take fewer or more than five 'whys?'.

A good tip is not to move into 'fix-it' mode too quickly which means resisting the urge to start dealing with the symptoms and to keep drilling down to the root issues. The 'five whys' also works well as a part of a problem tree or fishbone diagram where after identifying the main cause you can use the five whys technique to drill down to the sub-causes.

When using this technique with a problem tree it can be helpful to change the question slightly as you move down into the roots to: *"what causes that?"* and as you move from the trunk up into the branches to: *"what does that lead to?"*.

Appreciative Inquiry

'The beauty of this approach is its positive focus. As the Bible tells us - '*let us encourage one another'* (Hebrews 10 v 25). This helps participants relax, avoids defensiveness and encourages people to dream big and take risks. We also found that by sticking what we discovered on the walls we could help everyone see the journey we were on.'

Richard Lister

All too often our analysis tends to focus on what is wrong with a situation and consequently we end up focusing on the negatives. A refreshing alternative to this is the appreciative inquiry approach. At its simplest this asks three questions:

- Delight: What is going really well?
- Dream: What would we love to see happening in the future?
- Design: What steps can we take today to move towards this dream?

Depending on the context you may also wish to start with a fourth question:

- Discover: What does the Bible have to say about this issue or topic?

You can use this approach to structure a learning review, feedback from a visit or even just an informal conversation. It can also be used effectively as part of an evaluation. You could combine this approach with elements of other analysis tools such as the red, yellow and green hats of the six thinking hats approach to stimulate the creative input.