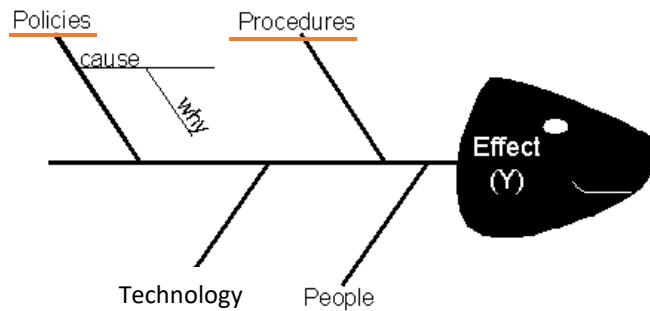


Proposed methodology to steer the discussion during Regional Meeting Session 14: Discussion on environmental data management country issues.

### Fishbone Diagram = The Cause and Effect Diagram



- Instrument that visualizes potential causes of a problem, with as output the root causes.
- When utilizing a team approach to problem solving, there are often many opinions as to the problem's root cause. One way to capture these different ideas and stimulate the team's brainstorming on root causes is the **cause and effect diagram**, commonly called a **fishbone**. The fishbone will help to visually display the many potential causes for a specific problem or effect. It is particularly useful in a group setting and for situations in which little quantitative data is available for analysis.
- The fishbone has an ancillary benefit as well. Because people by nature often like to get right to determining what to do about a problem, this can help bring out a more thorough exploration of the issues behind the problem – which will lead to a more robust solution.

#### WORKSHOP STEPS:

- 1) Split total group into sub-regional groups (Polynesia, Melanesia, Micronesia)
- 2) Clearly explain the objective/goal of the discussion: "analysis of a problem"
- 3) Clearly explain the methodology of the Fishbone Diagram. Ask the group who has done it before.
- 4) **STATING THE PROBLEM (EFFECT):** good formulation/definition of the basic problem. Framing it as a "why" question will help in brainstorming, as each root cause idea should answer the question. Do this together with the stakeholders (cf. buy-in for further analysis and higher involvement). Examples could be:
  - "Why is there lack of data in the Pacific"
  - "Why is data sharing not common practice in the Pacific"
  - "Why is data not easily available in the Pacific"?

All groups have to agree on the best Why-statement for the discussion and then place this question at the “head” of the fish.

- 5) **CONSTRUCTION OF THE FISHBONE:** agree on the major categories of causes of the problem (branches/fish bones from the main bone). Groups label the fishbones with the categories, or we can decide on the categories beforehand.

Suggested **cause categories:** Policies / Procedures / People / Technology / Methods / Materials-Equipment / Measurements / Environment / ...

- 6) **BRAINSTORM** all the possible causes of the problem and attach them to the appropriate branches. Ask “Why does this happen”? for each cause.
- For each cause identified, continue to ask “why does that happen?” and attach that information as another bone of the category branch. This will help get you to the true drivers of a problem.
  - As each idea is given, the group/facilitator writes the causal factor as a branch from the appropriate category (places it on the fishbone diagram). Causes can be written in several places if they relate to several categories.
  - Facilitators continue to ask “Why?” and generate deeper levels of causes and continue organizing them under related causes or categories. This will help you to identify and then address root causes to prevent future problems.
- 7) **PRIORITISATION:** the groups identify the top three root causes on their fishbone, by pasting colored sticky dots (each person in the group gets 3 sticky dots to paste individually).
- 8) **PRESENTATION:** each group presents their fish, with their analysis of the root causes of the problem.
- 9) **VALIDATION:** only if time permits. Validation of the prioritized root causes with the total audience.

#### MATERIAL:

- 1 big paper sheet per group, with fish already drawn on it (head, main bone and branches)
- Marker pens
- Colored sticky dots to prioritize