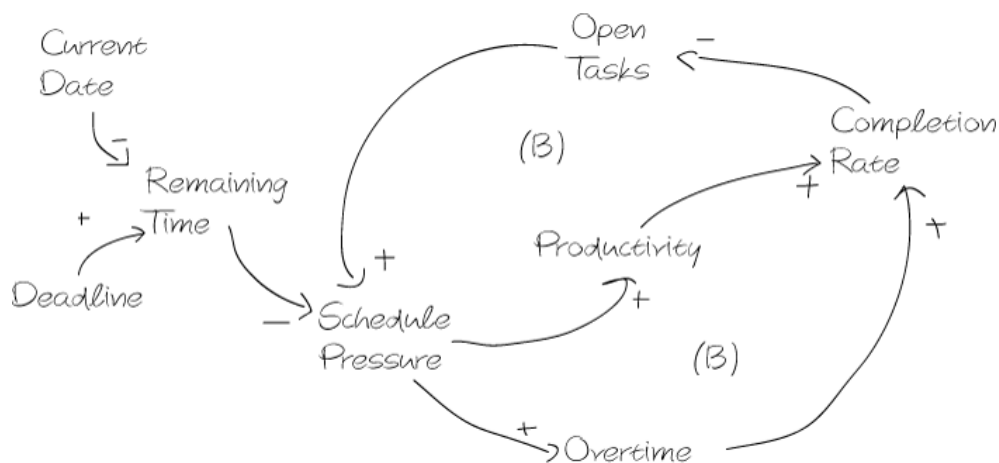


## Causal Loop Diagrams

A causal loop diagram (CLD) is a qualitative method for visualizing how different variables in a system are interrelated and how they influence each other to create system dynamics. This approach is used to build a simplified model of the factors and dynamics that influence a phenomenon of interest, for instance levels of peace in Colombia. By selecting a key phenomenon or response variable, and visualizing the factors that drive or inhibit that phenomenon as well as the influences those factors exert on each other, it is possible to learn more about the system surrounding the phenomenon of interest.

The CLD consists of a set of nodes that represent the variables in the system, and connecting lines that describe the relationships between the variables and direction of each relationship. A positive causal link between two nodes indicates a positive relationship, such that when one variable increases (or decreases), the other variable also increases (or decreases). In other words, the variables change together in the same direction. However, a negative causal link means the two nodes change in opposite directions. For example, if the node from which the link starts increases, the other node decreases, and vice versa.

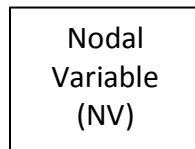


## Steps For Mapping a Causal Loop Diagram

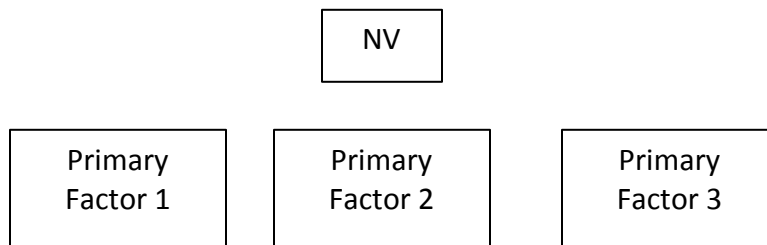
### Conceptual Pre-work:

**Step 1:** Define Map Theme (e.g. conflict over water resources)

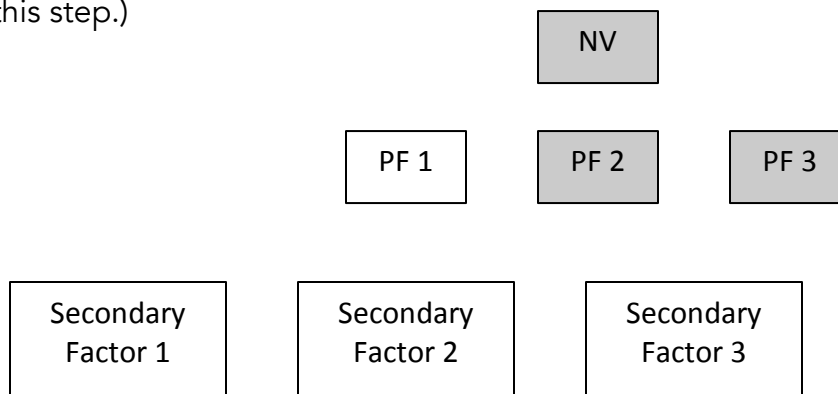
**Step 2:** Identify the nodal focus/variable (e.g. disputes over well access)



**Step 3:** Isolate 2-3 primary factors that most directly influence (and may also be influenced by) the nodal variable, and add these to the map. This will represent the core system map, a critical step in the mapping process that should not be rushed. The remainder of the mapping exercise will build off of this core map.



**Step 4:** Identify all relevant secondary factors that seem to be significantly related to each of the primary factors identified in Step 2, starting with the first primary factor (PF) and then moving to the second, third, etc.. (Do not begin mapping at this step.)

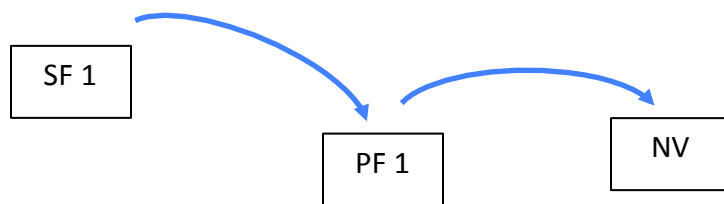


**Step 5:** Once the group feels that they have developed a sufficiently comprehensive list of factors, begin to prioritize them in terms of their overall relevance to the map, as well as their direct and indirect relationships to other primary factors.

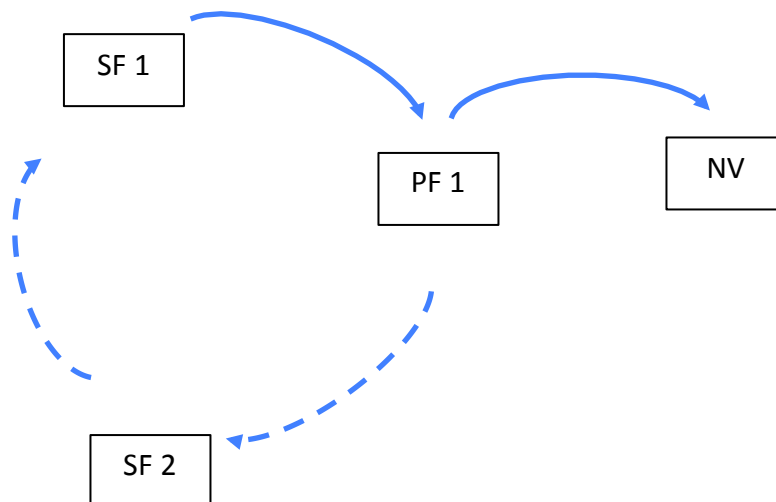
This is also a good time to clarify any factors that are not clear to the group, and to modify the terms used to describe the factor to be sure that it is operationalized as a variable (i.e. can move up and down). The group should try to limit this list of factors to 20 or less.

**Map Construction:**

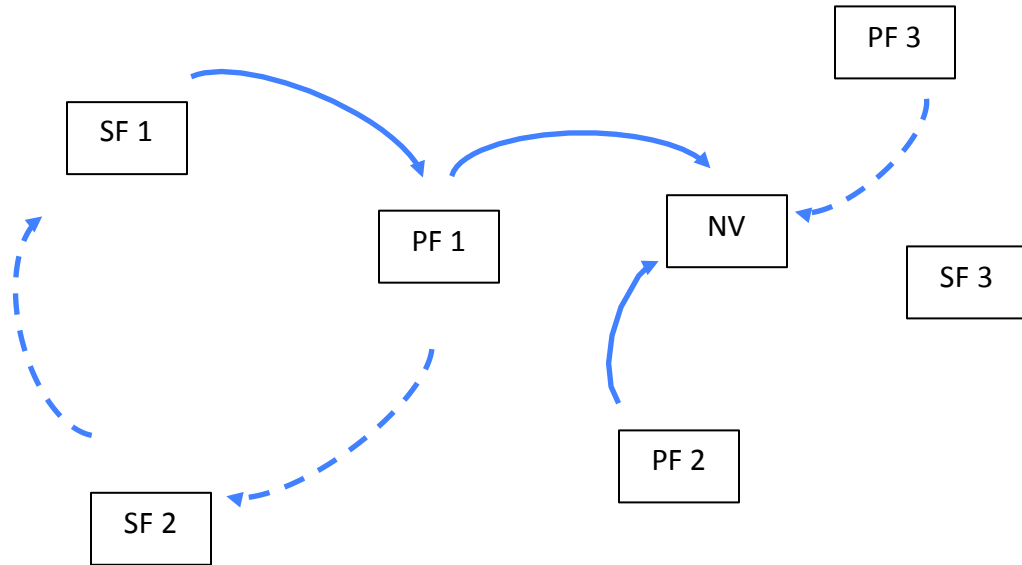
**Step 6:** Begin to add the factors to the map, starting by building off of only one of the primary factors to start with. As secondary factors are added to the map, the group should also be drawing directional lines indicating the relationships between the factors.



**Step 7:** Further modify the relationship lines between factors as being either 'same' (the factors change up or down together; denoted with a solid line), or 'opposite' (a change in the value of one factor changes the other factor in the opposite direction; denoted with a dashed line).

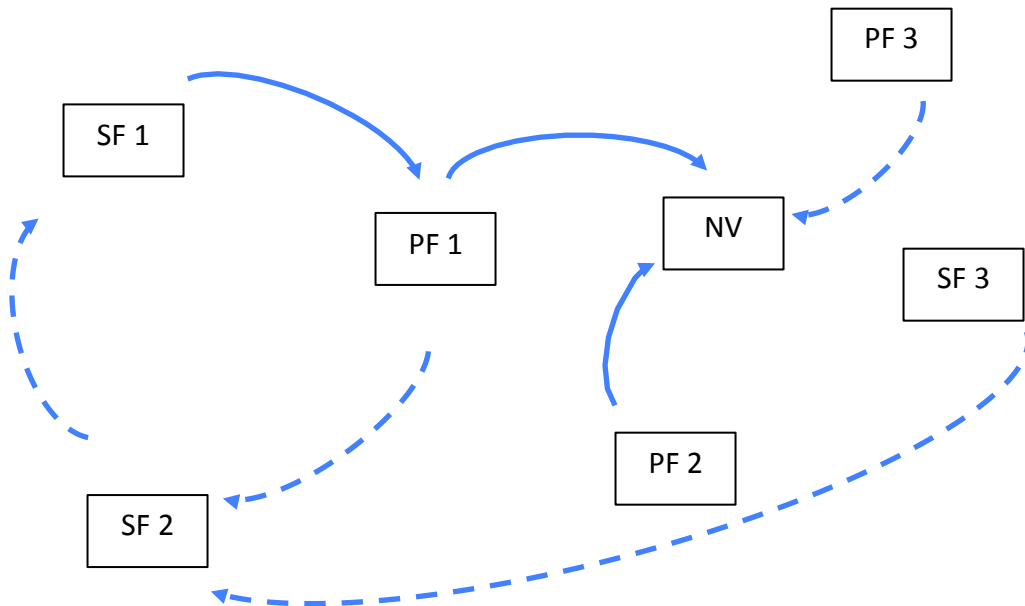


**Step 8:** Repeat Steps 6 & 7 for the remaining 1-2 factors, being sure to indicate not only the relationships to the primary factor and between each of these added factors, but also how these are related to the other primary and secondary factors previously added to the map.



**Refining the Map:**

**Step 9:** As a group, review the draft model to identify mistakes, points of confusion, or inconsistencies. Revise as needed.



**Step 10:** Identify thematic areas on the map. These are areas that all seem to share a relevant common theme. For example, leadership practices, political themes, specific policies, economic considerations, etc.

