

Manual



Eva Schiffer

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Net - Map toolbox

Influence Mapping of Social Networks®

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Introduction

Net-Map is an interview-based mapping tool that helps people understand, visualize, discuss, and improve situations in which many different actors influence outcomes. By creating Influence Network Maps, individuals and groups can clarify their own view of a situation, foster discussion, and develop a strategic approach to their networking activities. More specifically, Net-Map helps players to determine

- what actors are involved in a given network,
- how they are linked,
- how influential they are, and
- what their goals are.

Determining linkages, levels of influence, and goals allows users to be more strategic about how they act in these complex situations. It helps users to answer questions such as: Do you need to strengthen the links to an influential potential supporter (high influence, same goals)? Do you have to be aware of an influential actor who doesn't share your goals? Can increased networking help empower your disempowered beneficiaries?

Chapter 1 of this manual provides a few examples of ways in which the Net-Map toolbox can be used, while Chapter 2 provides step-by-step instructions to using the toolbox. Chapter 3 shows how the Influence Network Mapping exercise can be part of a bigger research or implementation process. And finally, social network analysis has developed a wide array of concepts and methods for the analysis of network maps and while this manual cannot examine them in great detail, Chapter 4 introduces the basic concepts of centrality, provides some insight into the use of network analysis computer programs, and refers to further literature, some of which is provided on the CD that accompanies this toolbox.

1. Ways in which the Net-Map toolbox can be used

The toolbox can help improve your understanding of any situation in which a number of people, groups, and organizations interact to achieve common or conflicting goals. Such situations can include preparing and monitoring policy interventions, improving and coordinating multistakeholder governance, facilitating inclusive community-based projects, sketching and discussing hands-on interventions for project teams, and understanding and strategically improving personal influence networks. Each of these is discussed below.

Preparing and monitoring policy interventions

You are the project leader of a new development or research project that aims to improve governance processes. Or you work in a government position and are striving for change and improvement in a rather immobile policy environment.

The toolbox can support you to understand the complex policy network in which you will be working. By interviewing core stakeholders in your field, you will begin to understand their views of the processes: Who is important? How are these people and organizations linked? What are their goals? How influential are they? How can they affect the achievement of your goals? This will help you to plan your interventions accordingly and identify the drivers of change, possible conflicts of interest, or power struggles. Furthermore, as part of the exercise, you will involve all your future partners in a learning and dialogue process. This will give everyone involved a better understanding of your own and each other's perception of the situation.

Throughout the process, you can use network mapping to monitor the success of your intervention. If, for example, you want to improve the responsiveness of a government agency to citizens' needs, you can learn a lot about your successes by drawing influence maps with both agency employees and citizens before and throughout your intervention. By conducting regular influence network mapping exercises, you will be able to understand not only whether certain goals have been achieved but also how and why (or why not).

Improving and coordinating multistakeholder governance

You are part of a multistakeholder governance body such as a water board or a commission on civic education that has a rather broad array of goals but limited formal decisionmaking capacity. Your organization includes members of government bodies, traditional authorities, and civil society. You believe that increased collaboration and exchange between the membership organizations will improve governance. However, each member of your group interacts with different networks and has different ideas about how people are linked, how influential they are, and how the networks can be used to achieve the group's goals.

Net-Map allows the members of your group to dialogue with and learn from each other. You will improve your understanding of each other's networks and views and can thus develop a common network map as a basis for strategic network planning. Through a sequence of individual and group mapping exercises, you will foster discussion and make sure you benefit from the complexity and diversity of your group while also developing a common understanding. You will learn who has access to what important people and groups, and will thus be able to use this knowledge strategically. The network maps also allow you to present the complex ways in which you achieve your goals to outsiders such as donors and national-level umbrella organizations.

Facilitating inclusive community-based projects

You work for a community-based conservation and development project that requires you to understand and integrate the needs and interests of different local and external groups. You want to make sure that everyone is included: rich and poor farmers, livestock owners, men and women, traditional authorities, government representatives, and nongovernmental organizations. You want to promote a better understanding between the different groups and develop a project plan that is inclusive and acceptable to everyone in the community, not just the local elites. Furthermore, you want to convince your donors that you have gone through an appropriate procedure to develop and implement this plan.

You use Net-Map to draw maps with representatives from all of the different groups. At a common meeting, all the participants can use these maps to explain to each other how they see the local situation, who is linked to whom, who they see as influential, and what goals they will pursue. They will discover that people with different positions in society see the world differently.

Visualizing networks, power, and goals makes it easier for everyone to discuss them. The concepts and visualization used in Net-Map are rather intuitive and easy to understand—even for community members with low or no schooling, thus allowing disadvantaged community members to document and express their views just as well as the other groups. And even though the goal will not necessarily be to agree on a common map, exchanging different views can help everyone involved to work on a solution that takes all the views into account. Repeated influence network mapping throughout the process will indicate whether you are on the path to reaching your goal.

Sketching and discussing hands-on interventions for project teams

You are the leader of a new project. You decide to gather the project team together to draw a map to ensure everyone is starting on the same page and that all actors are taken into account. All members of the team list everyone who can influence the success of the project, then jointly draw a map of their networks and determine their influence and goals. The resulting question is: If this is the situation as we see it now, who among us will do what tasks to achieve our goals?

By regularly incorporating network mapping into the planning process, you will broaden your team members' understanding of the complex field in which they are working and give them a tool that allows them to easily discuss and strategically use this understanding. Normally, each team member has an in-depth knowledge of and access to a certain area of the network (for example, your communication specialist will know about media linkages while your research and development staff will know about linkages to research institutions). No one person in a team will be involved in all different areas of a network, but a team that is aware of the formal and informal connections of its members can use this information to strategically assign networking responsibilities to respective boundary spanners.

Understanding and strategically improving personal influence networks

You are at a challenging point in your personal career. Even though you are working hard and providing good ideas and strong results, you feel as if something is stifling your progress. You see that you have to take a more strategic approach to your networking but it's not easy to keep an overview of your complex work field. You want to understand possible stumbling blocks, fruitful prospective coalitions, and where to focus your attention to increase your effectiveness and avoid stalemates.

Together with a coach or on your own, you can draw your own influence network map by asking yourself: Who can influence whether I achieve my goals? How are they linked to me and each other?

How much influence do they have on the achievement of my goal? Do they support me, hold me back, or are they neutral?

Looking at your personal influence network map, you can consider a number of different strategic approaches. You can try to strengthen or weaken certain links, convince a negative or neutral network actor to support you, add new actors to the network, or change your own goals. If you repeat and document this exercise regularly, you can document your progress and it will be easier for you to keep all important actors in perspective. Depending on the nature of your work situation you might want to discuss your network map with supervisors or colleagues to develop strategies together.

2. A step-by-step guide to using the Net-Map method

2.1 Preparation

Before you start using Net-Map and interviewing participants, make sure to clearly define the overarching issue you want to tackle. Do you want to know who can influence the success of a specific project that you are planning? Or do you want to generally map out the network environment of your organization? Are you interested in a specific conflict and how the network actors prevent or support conflict resolution? Are you examining a defined group of people (for example, all members of a working group) or do you simply want to find out who belongs to the network (for example, all those who can influence the course a reform will take)?

Very generally speaking, there will be four interview questions used to address the overarching issue:

- Question 1: Who is involved?
- Question 2: How are they linked?
- Question 3: How influential are they?
- Question 4: What are their goals?

Once you have defined your overarching issue, you will need to tailor your approach (and questions) to it. The toolbox provides a general, flexible framework that you can adapt according your needs. By defining the issue you want to examine, you have prepared yourself for asking Question 1: “Who is involved?” This question is discussed further in Section 2.4.

For Question 2 (“How are they linked?”), you have to define what links you want to examine. In a study focusing on a multistakeholder water governance body, for example, the following links were analyzed:

- Formal lines of command
- Flows of funding
- Giving of advice
- Flow of information

Depending on your issue, you might want to look at different links, such as lines of conflict (verbal, physical), kinship and friendship links, or flow of specific products. It may also make sense to focus on one kind of link—such as information flow—but divide it into subcategories: information regarding research results, information about business opportunities, and information about political processes, for example. Try to focus on the most important links and to limit yourself to *no more than five*. Otherwise your network will be too cluttered. Make sure the links are very specific. If they are not, you will end up linking everyone with everyone. See Section 2.5 for more about drawing these links.

For Question 3 (“How influential are they?”), you will need to find an appropriate definition of “influence” that your interview partners will understand. In different cultural and political contexts, you might have to use different terminology. Agreeing on a definition and/or terminology is especially important, since power and influence are sensitive issues in many contexts. If your definition is misunderstood by your interviewees, you will not be able to compare and draw conclusions. Section 2.6 discusses this in more depth.

For Question 4 (“What are their goals?”), you have to define the goals you want to examine. Try to find distinct goal descriptions that can apply to most of your players (see Section 2.7). In a natural resource

management context you might want to ask, for example, who focuses on economic development and who focuses on environmental issues. If you analyze your own network situation you might look at who actively wants to support you and who wants to stop you. Some actors will be rather neutral.

2.2 Pre-testing

Discuss the overarching issue you wish to examine, the defined links, and the goals with someone who is knowledgeable about the social environment you want to research. Using the guidelines presented below, draw your own Influence Network Map of how you see the situation to determine if your framework needs to be modified. You can continue your pre-testing by interviewing and drawing maps with people similar to those you want to participate. You can also use these pre-testing activities to discuss your choice of words. Should you use the terms “power,” “influence,” “authority,” or a descriptive phrase like “someone whose word has weight?” If you call one link “giving support,” do people think it means “giving words” or “giving money,” or is the term maybe limited to the context of party politics? It is important to adapt the terminology to your experience.

2.3 Setting up the interview

Decide who you need to interview. Sometimes you want to involve every member of a group in the process. In other circumstances you are interested in views from typical members of different groups. Or you have specific experts in mind. Sometimes your list of interviewees will develop during the process as you find out who are the important actors through drawing network maps. The following is a general description of how the method is used in individual interviews, though it can also be used to interview groups and facilitate group processes (see Section 3.2).

When you meet your interview partner, allot plenty of time for the interview and conduct it in a quiet environment equipped with a big, flat surface. You will have determined in your pre-testing how long your specific network mapping might take. While interview times can vary greatly, it is realistic to ask your interviewees for at least one to two hours of their time. If you interview groups or need interpretation, plan for more time.

Decide on how you want to record the comments and discussions that go with the mapping; they are very valuable to explain why the map is the way it is. Because you will be rather occupied by facilitating the drawing of the map, it is recommended that you either have a second person taking notes, or record the discussion.

Prepare one empty mapping sheet for each interview by filling out the legend that contains information about the interview and about the colors of links.

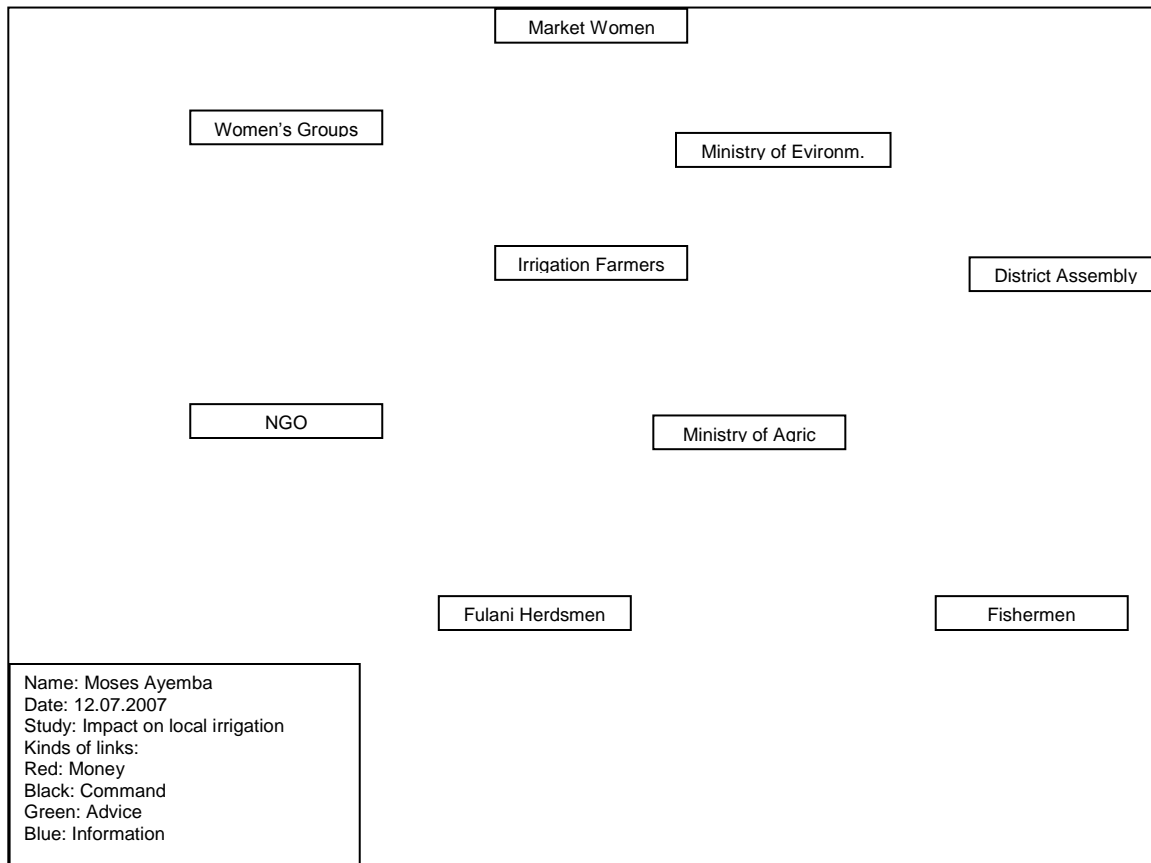
2.4 Question 1: Who is involved?

Place a mapping sheet in front of your interviewee and ask him or her to name all individuals, groups, and organizations that can influence the issue you are examining. The questions could include:

- “Who can influence the restructuring of our organization?”
- “Which groups and individuals are involved in this chieftaincy conflict?”
- “Who has influenced this change of policy?”

Encourage your interviewee to mention every actor that comes to mind, not only those who have formal decisionmaking capacity in the process. Write every actor on an actor card and distribute the cards on

the map. Give your interviewee time to think this through properly and allow him or her to add actors throughout the interview. Before going to the next question, read out loud all actors, since this might make the interviewee think of other actors to add. In some cases, you might insist that the interviewees add themselves to the actor list. If you are working with illiterate interviewees, let them pick figurines for each actor and place them next to the actor cards; this way, it will be easier for them to remember who is who. You might chose different colors of cards for different groups of actors (use pink cards for all governmental actors, for example, or green ones for all non governmental actors). This also helps to visually structure the map more clearly.

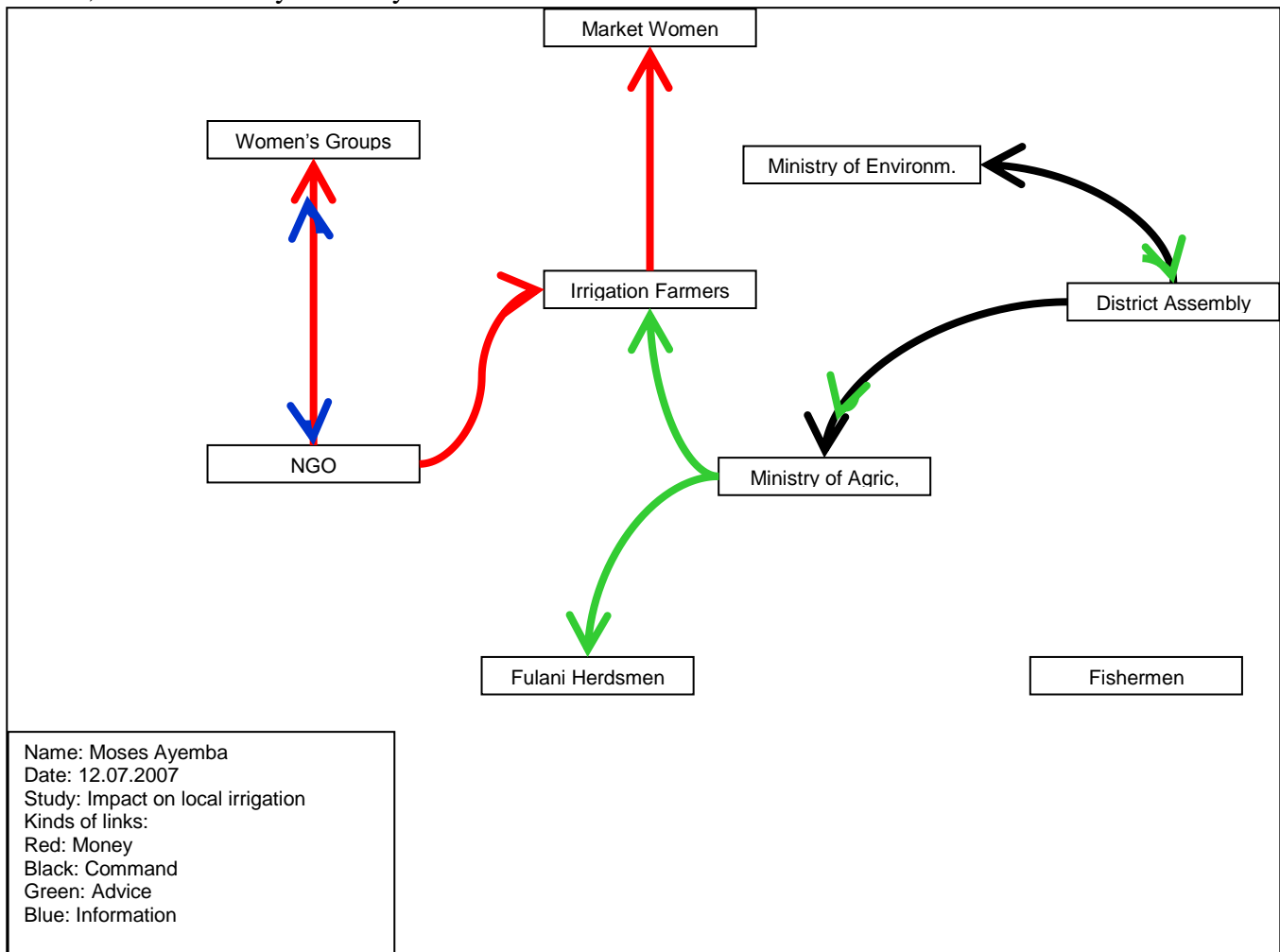


Picture 2: Mapping sheet with actor cards

2.5 Question 2: How are they linked?

You have defined the links you want to look at through your preparation and pre-testing. Explain to your interviewee that you want to find out how all these people and organizations are linked to each other. You will connect the actor cards with arrows indicating that “something” (such as information, command, or money, for example) flows from one actor to the other. In cases where the actors *exchange* something, the arrow has two heads. In cases where two actors exchange more than one thing, you can draw a link that has a number of arrow heads of different colors (see Picture 3). Present the kinds of links by color and explain what each color represents. In Picture 3, for example, red represents money, black represents command, green represents advice, and blue represents information.

It makes sense to start with the link that you expect to be the least common, finish this color, and continue with the next. In this way the picture will develop slowly and the process will be less messy. With complex maps, you might need to guide your interviewee through the process and make sure that he or she does not forget a link, though it is important you do not push the interviewee to link actors just to please you. Make sure your interviewee understands that you are not looking at how links should or will be, but at how they currently are.

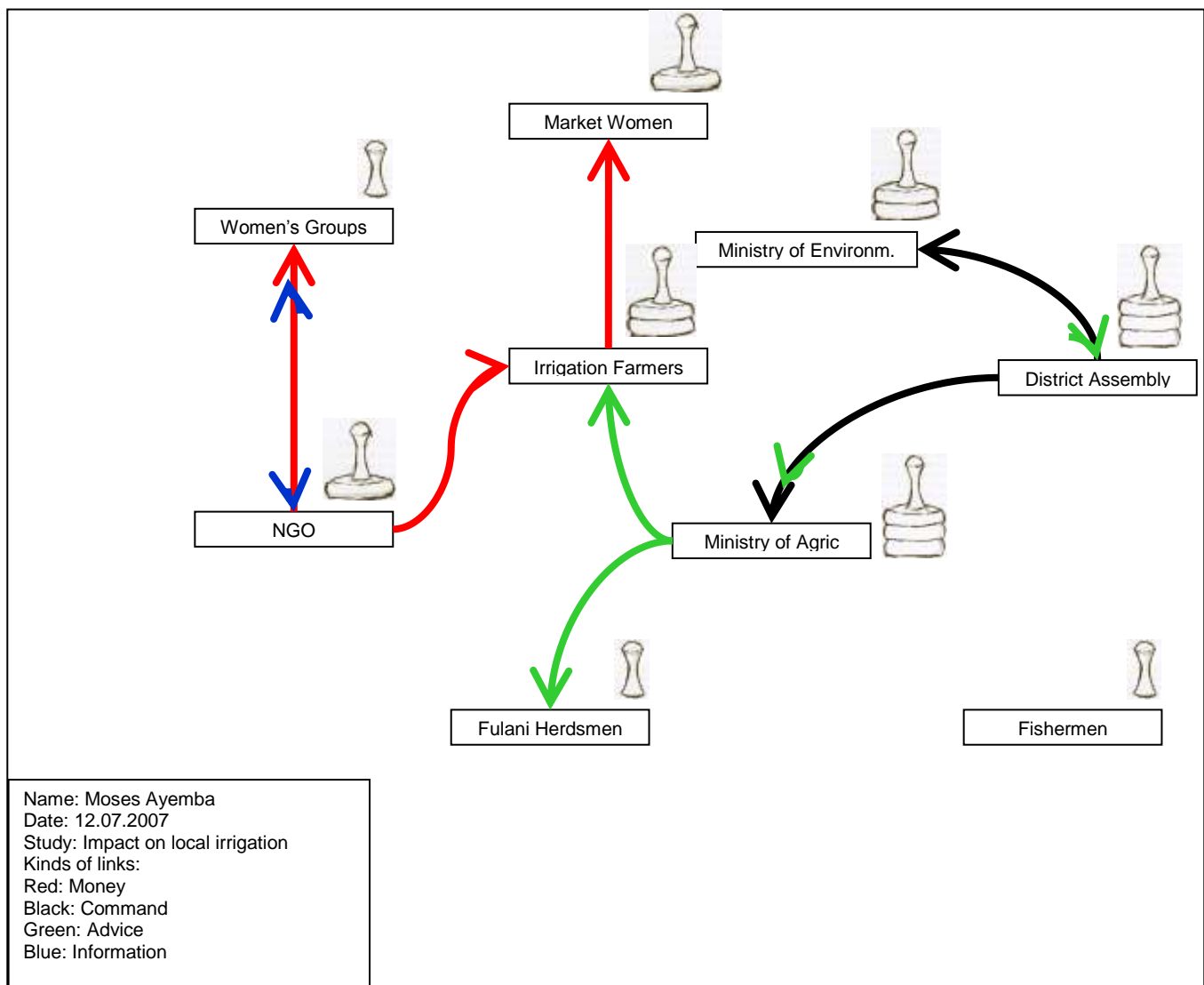


Picture 3: Mapping sheet with actors and links

2.6 Question 3: How influential are they?

To avoid misunderstanding, it is important that both the interviewer and the interviewee share the same understanding of the term “influence.” In your pre-testing and discussion, you will have developed a commonly agreed-upon definition of “influence.” It is important that the interviewee understands that the question is about the ability of the actor to influence a specific issue, and not about formal hierarchies. The question is: How much influence does this actor have in this specific field/activity/organization—and not in a more general sense. For example, the president of a country will be seen as more powerful in a general sense than a district chief executive (DCE). However, when it comes to influencing the implementation of a specific intervention in his district, a DCE tends to have much more impact than the president.

Emphasize that the *sources* of influence could be diverse, ranging from legitimate decisionmaking capacity, through giving advice or incentives, to bending or breaking the rules.

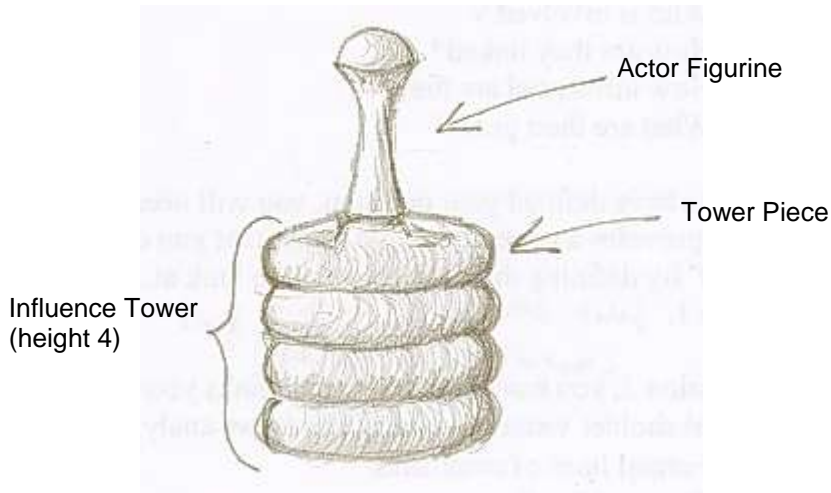


Picture 4: Mapping sheet with actors, links and influence towers

Once this understanding of “influence” is established, the interviewee will be asked to assess who has what amount of influence on the given issue. Chose one actor figurine for every actor and put it on an

influence tower. This tower might consist of a certain number of influence pieces according to how strongly this actor can influence the issue at stake. Explain the following rules to your interviewee:

- The more influence an actor has the higher the tower.
- The towers can be as high as the interviewee wants.
- Two actors can have towers of the same size.
- If an actor has no influence at all, the figure is put on the ground level without any influence tower.



Picture 1: Network Mapping Tools

After setting up the influence towers, verbalize what you see, starting with the highest tower. For example: “You have given the chief the highest tower with a height of five tower pieces, followed by the assembly man and the earth priest, both on towers of four... and finally you say the Fulani herdsman and the unit committee members have no influence at all.”

Encourage the interviewee to adjust anything if he or she has second thoughts. This is especially necessary in complex influence networks. If you change one tower, make sure to adjust the others accordingly. Once the interviewee is content with the whole set-up, note the height of the influence towers next to the actors’ names on the network map.

Starting with the most influential actor, you now begin to ask the interviewee about the sources and effects of influence. Your questions will vary according to your general goal and to the overarching issue you are exploring. As you become more familiar both with the tool and the situation you are analyzing, you will see that it becomes easy to see at first glance what is special, strange, or noteworthy about a specific influence network map.

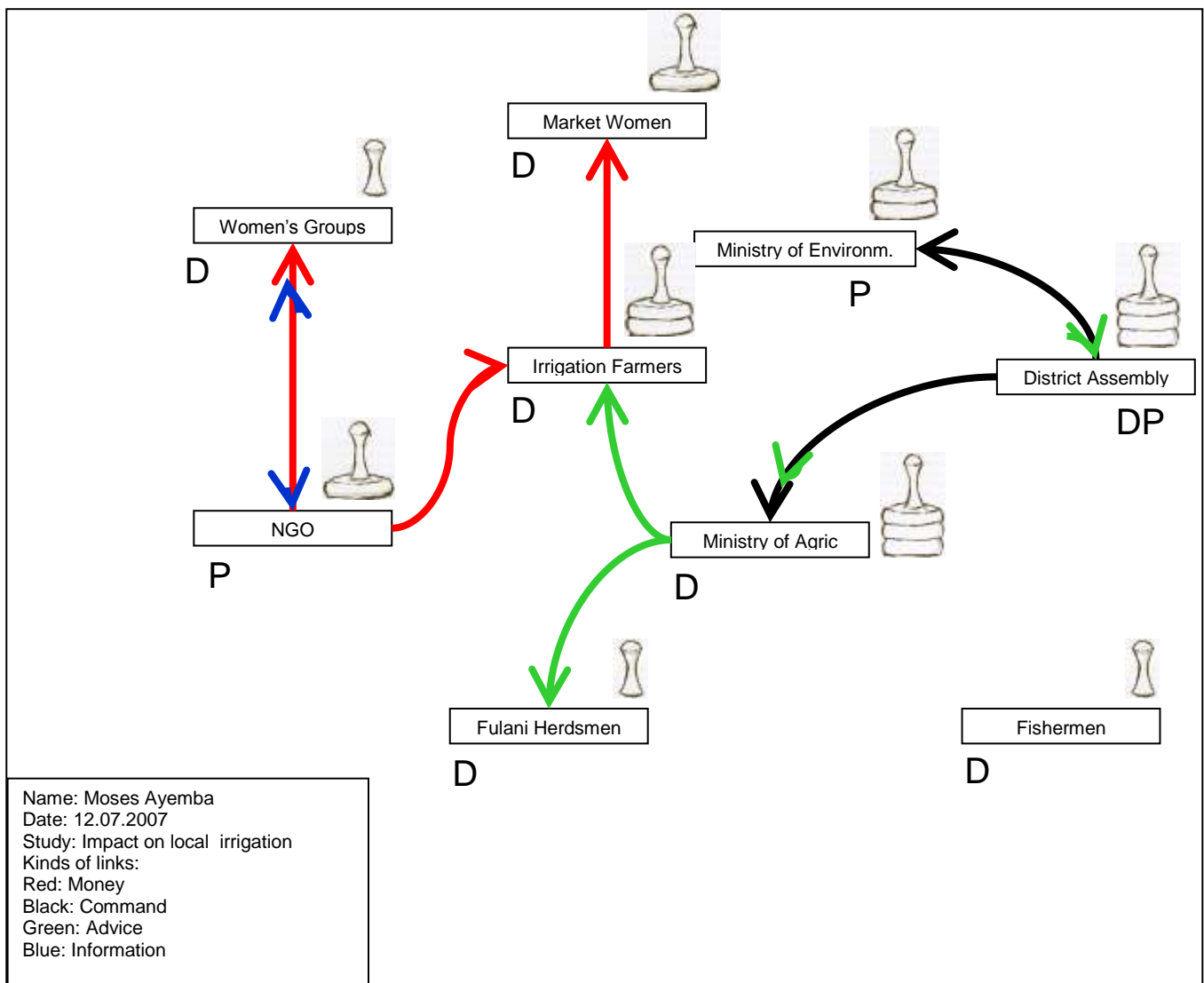
Your questions may include:

- I see you have put this actor on the highest tower. Why? Where does his/her influence come from?
- You say that these two have the same level of influence. What happens if they disagree? Is their influence based on the same grounds? Does it have the same range?
- I have heard there is a conflict between these three actors. Could you explain to me what it is about?
- You have linked this actor to so many others, but you say he doesn’t have much influence—why is that so?

Make sure you go through all the actors on your map and keep in mind that it is crucial to understand not only why the powerful are powerful, but also why others are seen as having no influence.

2.7 Question 4: What are their goals?

Now you know who is involved, how they are linked, and how influential they are. However, if you do not know the goals of your actors, you do not know in which direction they want to move. For example, if you are looking at the question “Who will influence whether or not my organization reaches this specific goal?, you do not yet know whether the actors will use their links and influence to support or hamper the achievement of your goal. In your preparation and pre-testing, you will have defined a number of relevant goals you want your interviewees to examine. Ask your interviewees to focus on each and every actor and tell you which of your pre-defined goals that actor is likely to support. Add abbreviations or symbols next to each actor card. If you want to know who is more development oriented and who is more focused on protecting the environment, your acronyms could be D (development) and P (protection), as in the example below.



Picture 5: Mapping sheet with actors, links, influence towers and goals of actors (P=Protection, D=Development)

You might want to make room for actors who follow a number of goals, by allowing more than one symbol/acronym per actor. In the analysis of a conflict, you might consider adding plus and minus signs for actors who support or contradict the interviewee's goals. Or, especially for conflicts that have prevailed for a long time, it might be interesting to note who is interested in continuing the conflict and who would support reconciliation. This information will help to develop peace-building strategies. The combination of influence towers and goal orientation signs can serve as a real eye-opener, and can allow participants to be more strategic in their networking activities. However, some interviewees might not be comfortable with sharing such explicit judgments and in many situations it might be more appropriate to find more neutral terms for characterizing the different goals of actors.

2.8 Discussion

Now you have completed one Influence Network Map. Discuss the result with your interview partners. Depending on the goal of this specific mapping process, you might ask your interviewees to think strategically about the network and develop ideas to improve the situation in the future.

3. How do you structure an Influence Network Mapping process?

Very often the individual influence network map is just one part of a bigger process. How you structure your influence network process strongly relates to the issues you want to explore and the developments you want to facilitate.

3.1 Who do you involve?

When you consider who to involve, the answer might differ depending on the main goal of your mapping exercise. Do you want to gather knowledge and use Net-Map mainly as a research tool, or do you want to use it to facilitate processes?

If you are using the tool mainly for research, you will want to interview people who *know* something about the issues at stake. As this is not a statistical approach, there is no certain number of actors you need to interview. Follow your common sense: You will know you have interviewed enough people once you cease to receive new information from each new interview, even though your interviewees are diverse. If your focus is mainly on facilitating a process, you will want to interview people who *influence* or *are influenced by* the issue at stake. Because the facilitation of a process is a continuous activity, you will have to define who is going to be part of this interaction. This decision will often be based on strategic considerations rather than on the question of whether an added actor adds new knowledge. Often your goal might be a combination of the two, so in your sampling you will keep both perspectives in mind.

3.2 Group exercise or individual interviews?

Previous sections have described how to conduct individual interviews. However, the tool can also be used to interview groups and facilitate group processes. Drawing a map together can help group members' ideas and understanding of a situation be seen and heard. In some instances, it makes sense to do a first round of individual interviews and then bring the group together to draw a common network. Group mapping can make a lot of sense

- if you want to facilitate the group's organizational learning and strategic planning;
- if you want to increase group cohesion;
- if you want to know, for example, how fishermen or female farmers in a community as a whole perceive networks without a strong focus on everyone's personal individual links;
- if you want to use the tool to increase the understanding between people with different views or interests concerning the issue at stake.

If you facilitate a group mapping process, your role will be especially important if group members' opinions differ. Encourage them to explain: Why do they think this actor has a lot or very little influence? What do they mean if they say that these actors are linked? What concrete interactions between the two can they recall?

Make sure to plan for enough time for a group mapping exercise. Because the time needed depends strongly on group size, eagerness to discuss, and whether or not the issues involved are controversial, it is difficult to give a guideline here, but a group session with five or six enthusiastic participants can easily take up a whole workshop day. For a group bigger than three, you might prepare your own bigger actor cards and mapping sheets, so that everyone can stand around the table and see properly. If the group is very big, it makes sense to divide it into subgroups of five or six participants and start with small-group mapping. Let them map out their network perceptions and present them to the other groups,

and then you can help bring the different results together. Keep in mind that the bigger the group, the smaller the input from individual group members.

If you have previously conducted individual interviews with all of the group members, consider limiting the network actors listed in the group mapping exercise to those mentioned in the individual interviews. Prepare actor cards with these names and allow your group members to remove or group actors under an umbrella term but caution them not to add new ones, if it can be avoided. This will allow you to save some time without harming your results.

3.3 How do you use the maps?

You will see that by mapping out the influence networks, you and your interview partners will learn a lot about the issues at stake. You can use the maps as they are to facilitate group discussion and you can use the insights gained from the mapping exercise to improve your plans and activities. For many interventions, especially those that are process oriented, this will be enough. This could be the case if you want to draw your own career influence network or if a project team wants to sketch a project network map before assigning responsibilities at a team meeting. For facilitating group processes like a community-based development project, the hand-drawn maps made by different participants can be your strongest tool in the discussion.

In other cases, you might want to transform the hand-drawn maps into computer-generated ones and do some further quantitative network analysis. It is beyond the scope of this manual to provide a full introduction to the ever-growing field of social network analysis or to the multitude of social network analysis computer programs. However, the following section addresses some of the general concepts of social network analysis that might help to increase your understanding of the maps you have drawn and gives you an idea of why it might make sense to familiarize yourself with some of the computer software that is available.

3.4 Some concepts of social network analysis

Most people have an intuitive understanding of how different positions in a network can lead to the increased or reduced importance of an actor. Some examples of the important positions in a network are those that

- have a lot of links,
- have links to people who have a lot of links,
- link people who are not otherwise linked, and
- are able to reach everyone in the network without going through too many intermediaries.

In social network analysis, these four examples are among the concepts used to determine the *centrality* of an actor in a network. Social network analysts have developed numerous ways of calculating centrality. In the social network terminology, the above examples have specific names:

- Degree Centrality (number of links)
- Eigenvector Centrality (links with actors with high degree centrality)
- Betweenness Centrality (linking actors not otherwise linked) and
- Closeness Centrality (length of path to every other actor in the network)

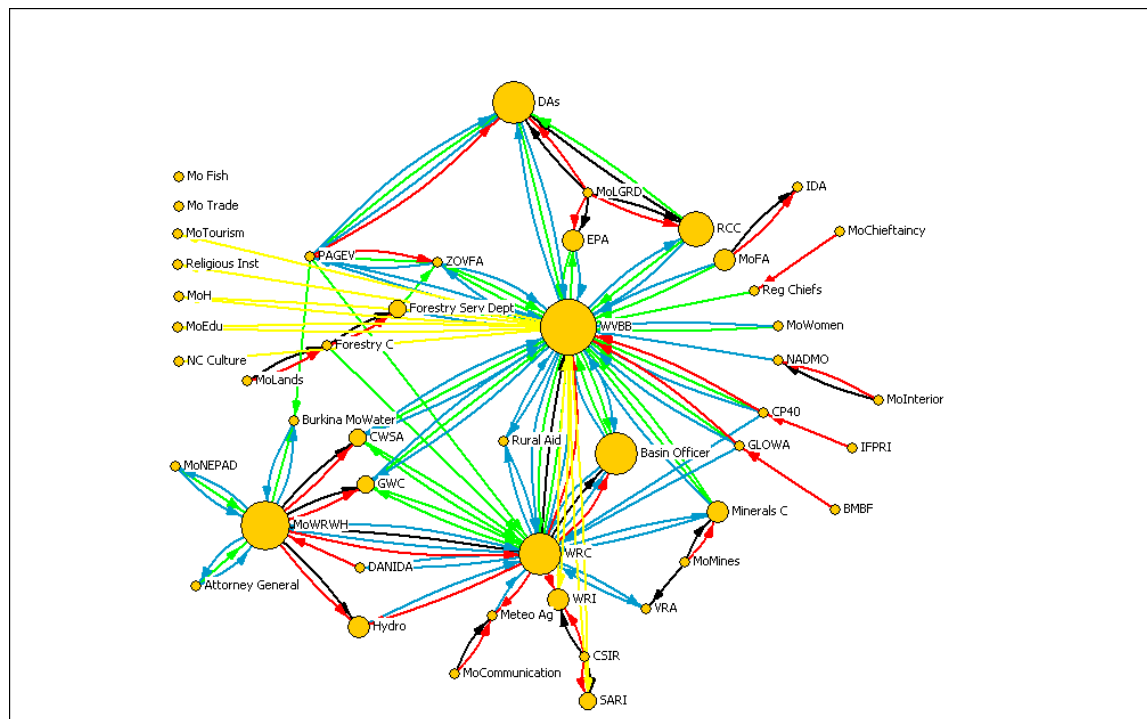
While it is rather easy to determine the degree centrality (by counting links), the other centrality measures require more complex mathematical operations. Network analysis software provides these and a great number of other formulas to help you analyze your data. In most cases, you are required to transform the map into a matrix (though some programs, such as VisuaLyzer, also allow you to actually draw the map and they develop the matrix for you). As shown in Table 1, the rows and the columns of

your matrix contain all the network actors. If a box is marked “1,” that means that an arrow goes from the actor in that row to the actor in that column. In Table 1 that means that the traditional authority and the district assembly exchange something (such as information) while the NGO provides something to the traditional authority and the district assembly (row four) but doesn’t receive it back from them (column 4).

	Traditional Authority	District Assembly	NGO
Traditional Authority	0	1	0
District Assembly	1	0	0
NGO	1	1	0

Table 1: Network Matrix

When entering the data, you have to follow the arrows in your network map, filling in one matrix for each kind of link. The software transforms these matrices into network maps and allows you to calculate the different centrality measures. There is a growing number of network analysis software programs, though it requires some patience and dedication to become familiarized with them. One of the most commonly used is UCINet. If you do not want to process huge amounts of data through highly sophisticated procedures, other programs such as VisuaLyzr that focus more on the visualization of networks tend to be easier to understand and apply (Free trial versions of both programs can be downloaded from the Internet).



Picture 6: Computer visualization of an influence network map, size of node reflects height of influence tower (VisuaLyzr)

This manual includes a very selective literature section for those users who want to go beyond mapping networks and get deeper into the analysis. The section also provides a basic introduction to social network analysis and includes some papers related to Influence Network Mapping.

4. Feedback desired!

This manual has provided a number of examples for ways to use the toolbox. However, Net-Map has the potential to go beyond these examples, and so we are curious to hear about diverse uses of the mapping tool from different sectors and different cultures. We will be grateful to learn from your experience and encourage you to contact us—both with your success stories and also with any problems you might encounter on the way. This will help us to improve the toolbox and this manual to make them more responsive to the needs of you as a user.

Please contact:

Eva Schiffer

International Food Policy Research Institute (IFPRI)

IFPRI-NetMap@cgiar.org

More information and up-dates about the latest developments can be found at:

<http://netmap.ifpriblog.org>

5. Further reading

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