A Stakeholder Map for Climate Change Adaptation in Bangladesh's Agricultural Sector

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Table of Contents

1 Introduction 1
Background 1
Objective of this report 1
The “Enhancing Assets” research project 1
Policy instruments and areas of intervention to enhance assets 2
2 Methodology for the Stakeholder Analysis 3
3 Lessons Learned 4
The Network Structure 5
Target Groups 7
Influence 8
4 Conclusions 10
Annex 1 - Actor Acronyms and Characteristics 11
I. Annex 2: Net-Map Interview Guide 15

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- CARE
- ADB
- Water Aid
- BRAC
- Practical Action

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1 Introduction

Background

It has now been widely accepted that climate change is one of the biggest challenges facing agriculture in the 21st century. Among those who are most affected are poor agricultural households in the developing world, even though these are the ones who have contributed least to climate change. Climate change is expected to result in gradual changes in temperature and sea level rise as well as more variable precipitation and an increase in the frequency and intensity of extreme weather events such as floods, droughts and storms (Ali 1999).

There is an increasing body of research focusing on the question of how agricultural households will be affected by climate change, and how they perceive climate change (Nelson et al. 2010; Deressa et al. 2009). In view of these predicted effects on poor agricultural households, there is an urgent need to identify the strategies that are best suited to support these households in adapting to climate change. Against this background, the International Food Policy Research Institute (IFPRI) and partner organizations in Ethiopia, Kenya, Mali and Bangladesh have recently started a new research project that focuses on this topic. The project is entitled "Enhancing Women's Assets to Manage Risk under Climate Change" (in short referred to hereafter as "Enhancing Assets Project") and is supported by the German Federal Ministry of Economic Cooperation and Development. The project aims to create knowledge that will help policy-makers and development agencies to strengthen the capacity of male and female smallholder farmers, fishers and livestock keepers to manage climate-related risks.

Objective of this report

This report presents the results of a stakeholder analysis, which had the following objectives:

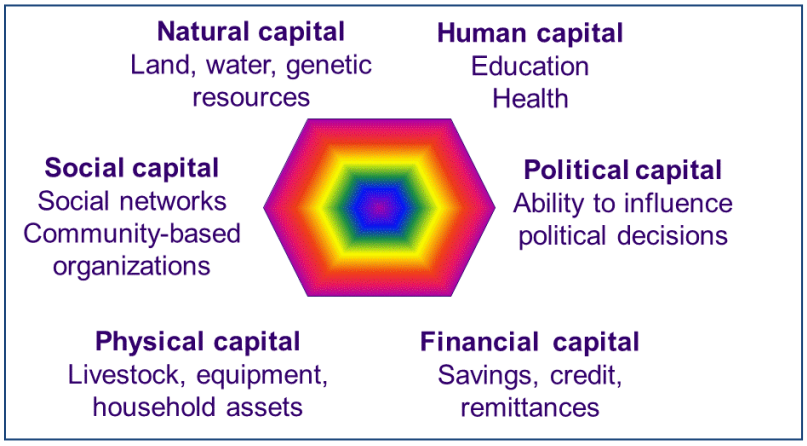
- to identify potential partners in the research process,
- to find out which organizations could make use of the research findings in their activities, and
- to derive implications for the communication and outreach strategy of the research project.

In addition to a review of documents and individual interviews, a stakeholder analysis workshop was conducted in Bangladesh on November 15, 2011. A participatory mapping tool referred to as Net-Map was used to conduct the stakeholder analysis. The results of the stakeholder analysis are expected to be useful not only for the "Enhancing Assets" project, but also for other organizations and projects that work in this policy field.

The "Enhancing Assets" research project

The "Enhancing Assets" project draws on the findings from earlier studies, which have highlighted the role of assets in reducing vulnerability and helping households to move out of poverty. Following the Sustainable Livelihoods Framework (DfID 2001) and IFPRI's Gender and Assets (GAAP) framework (Meinzen-Dick et al. 2010), the project defines assets in a broad sense, including natural capital (access to land, water and genetic resources), social and human capital, as well as physical and financial capital. "Political capital", that is, the ability to influence political decisions at the local or at higher levels is also considered to be an asset.

Figure 1: Types of Assets



Source: Adapted by authors from the GAAP Conceptual Framework and the Livelihoods Framework (Meinzen-Dick et al. 2011)

Assets are particularly important in the context of climate change because they enable households to adapt to increasing climate-related variability of production. However, climate-related shocks, such as droughts and floods, can also deplete the assets that people have accumulated, either by destroying them directly (e.g., loss of physical property during floods livestock during droughts), or because people are forced to sell their assets to cope with these shocks. IFPRI research has shown that shocks affect men's and women's assets in different ways (Quisumbing 2009). While illness shocks tend to affect women's assets more, covariate shocks tend to affect husbands' assets in Bangladesh, probably because they are more directly involved in agricultural production. However, droughts have a detrimental impact on women's livestock holdings, possibly because livestock are more vulnerable to drought owing to scarcity of water or fodder; because wives' livestock, being smaller, are sold off first; and because priority may be given to the preservation of the household's joint or husband-owned livestock, particularly if they are working animals (Quisumbing, Kumar, and Behrman 2011). Against this background, the Enhancing Assets project places a particular focus on women's assets.

The research project will entail the following activities:

- Review of existing experience with innovative risk management approaches worldwide
- Econometric analysis of existing data sets to understand how risks affects men's and women's assets and their ability to deal with climate-related risks.
- Experiments to assess innovative approaches to climate risk management, such as insurance schemes;
- Qualitative and participatory approaches to understand the governance challenges of projects aiming build households' assets.

Policy instruments and areas of intervention to enhance assets

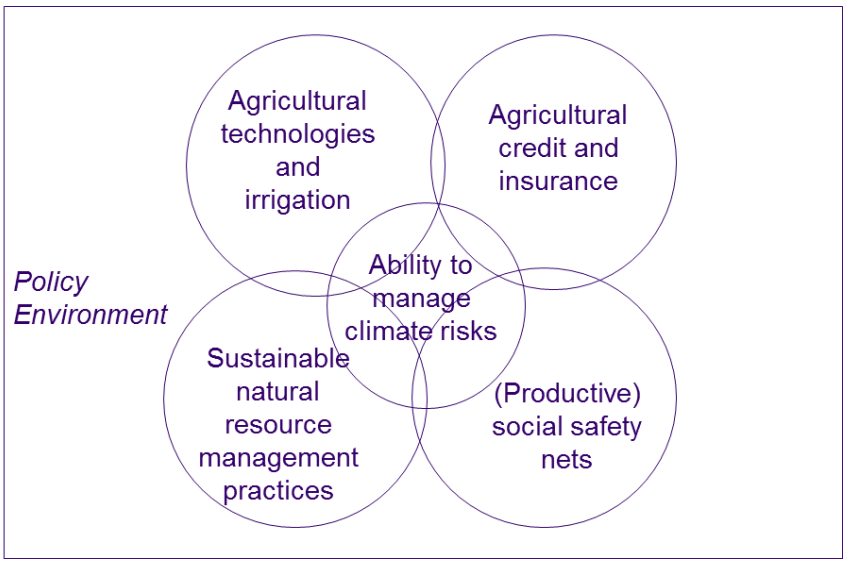
To identify the stakeholders that could use the findings from the research project, it is important to identify the policy instruments through which governments, non-government organizations and development agencies can assist male and female household members

- to improve their access to and control over assets,
- to increase the return to their assets, and
- to use their assets effectively to adapt to risks associated with by climate change.

Figure 2 displays the overlapping policy fields and areas of intervention that are related to these tasks. Agricultural technologies, such as improved varieties that are better adapted to climate risk, help reduce the yield risks caused by climate change. Improved access to irrigation can also serve this goal. The adoption of sustainable natural resource management practices, such as erosion and flood control measures, is another important strategy to maintain the value

of the households' land assets in view of climate-related risks. These strategies, which are displayed on the left-hand side of Figure 2 can be seen as technology-focused approaches.

Figure 2: Policy fields related to agricultural climate change adaptation



Source: Authors

The right-hand side of the figure shows the approaches that focus on the development of institutions, such as agricultural credit and insurance schemes, and the establishment of safety nets, which may concurrently enhance production goals (productive safety nets). The "Enhancing Assets" project is expected to generate policy-relevant knowledge on these different areas of intervention, since the existing data sets to be analyzed and the primary data to be collected address these issues. The project will not cover all intervention areas in all countries, but it is expected that the findings will, to some extent, be relevant across countries.

A review of development activities indicates that organizations working in the policy fields indicated in Figure 2 use, to a large extent, group-based approaches. Examples include agricultural extension groups, water user associations in irrigation schemes, groups practicing community-based natural resource management, micro-credit groups, groups that are formed for weather-based insurance schemes, and groups that receive assistance through social safety nets. Research has shown that group-based approaches can be particularly effective in building households assets of the poor (Kumar and Quisumbing 2010). However, group-based approaches may also face the challenge of elite capture and exclusion of poor households and of female household members (Eriksen and Lind 2009). Against this background, the "Enhancing Assets" project places particular emphasis on group-based approaches, and includes an assessment of the governance challenges involved in implementing those approaches with a view to strengthening the asset base of poor households.

Since the policy instruments and intervention areas that can help agricultural households to better use their assets for risk management cover a wide range of activities, one can expect that the number of organizations and agencies that can potentially make use of the research results of this project are rather diverse. Therefore, a stakeholder analysis was conducted at the beginning of the project in each of the four study countries. As mentioned above, this report presents the results of the stakeholder analysis in Bangladesh. The report is structured as follows: Section 2 describes the methodology for the stakeholder analysis. Section 3 gives an overview of the "stakeholder landscape" identified in the process. Section 4 draws implications for the communication and outreach strategy of the "Enhancing Assets" project. Section 5 presents some conclusions.

2 Methodology for the Stakeholder Analysis

The interview method used for the stakeholder analysis was the Net-Map method. Net-Map (Schiffer 2008), a participatory interview technique that combines social network analysis (Wasserman and Faust 1994), stakeholder

mapping, and power mapping (Schiffer 2007). Net-Map helps people understand, visualize, discuss, and improve situations in which many different actors influence outcomes. By creating maps, individuals and groups can clarify their own view of a situation, foster discussion, and develop a strategic approach to their networking activities. It can also help outsiders understand and monitor complex multi stakeholder situations.

In particular, Net-Map allows stakeholders to examine not only the formal interactions in the network, but also the informal interactions that cannot be understood by merely studying documents concerning the formal policy making procedures. Actors meet to exchange information and lobby for certain policy goals; local and international initiatives contribute by adding funds or research; and all of these interactions contribute to shaping the content and process of policy making. To get a realistic understanding of these formal and informal links and how the actors use them to influence the policy process, empirical field work is crucial (as only the formal links can be deducted from government documents). To understand how the actors interact with each other in the process, social network analysis (SNA) approaches are especially suitable, as they allow for a complex representation of a system, putting the actions of individuals and organizations into a greater perspective. SNA (Hanneman 2005) explains the achievements of actors and the developments within groups of actors by looking at the structure of the linkages between these actors. Thus, while traditional survey based approaches collect data about attributes of actors, network analysis focuses on gathering information about the network through which these actors connect.

More specifically, in this Net-Map exercise respondents were asked:

- What actors are involved in climate change adaptation in Bangladesh?
- Who is giving advice to whom among these actors?
- How much influence does each actor have over improving the ability of farmers and pastoralists to adapt to climate impacts?
- What are the priorities and core activities of each of these actors in terms of climate change adaptation?

The answers to these questions were arrived at by group consensus. The actors' names were written on small note cards and spread across a large piece of paper. Upon nominating an actor to be included, respondents would explain why that actor was important to add and what their primary activities are in this field. Advice flows were drawn among the actors, and then influence towers, which indicate the strength of influence of each actor, were added to each actor card. The results of this exercise were a visual depiction of the stakeholder network for climate change adaptation in Bangladesh, and notes from the in-depth discussion during the process. The network data was entered into a social network analysis program in order to better assess the network structure.

The visual depictions of this network, and the key lessons we learned from the network and, in particular, from the reflections of the respondents, are described in the next section.

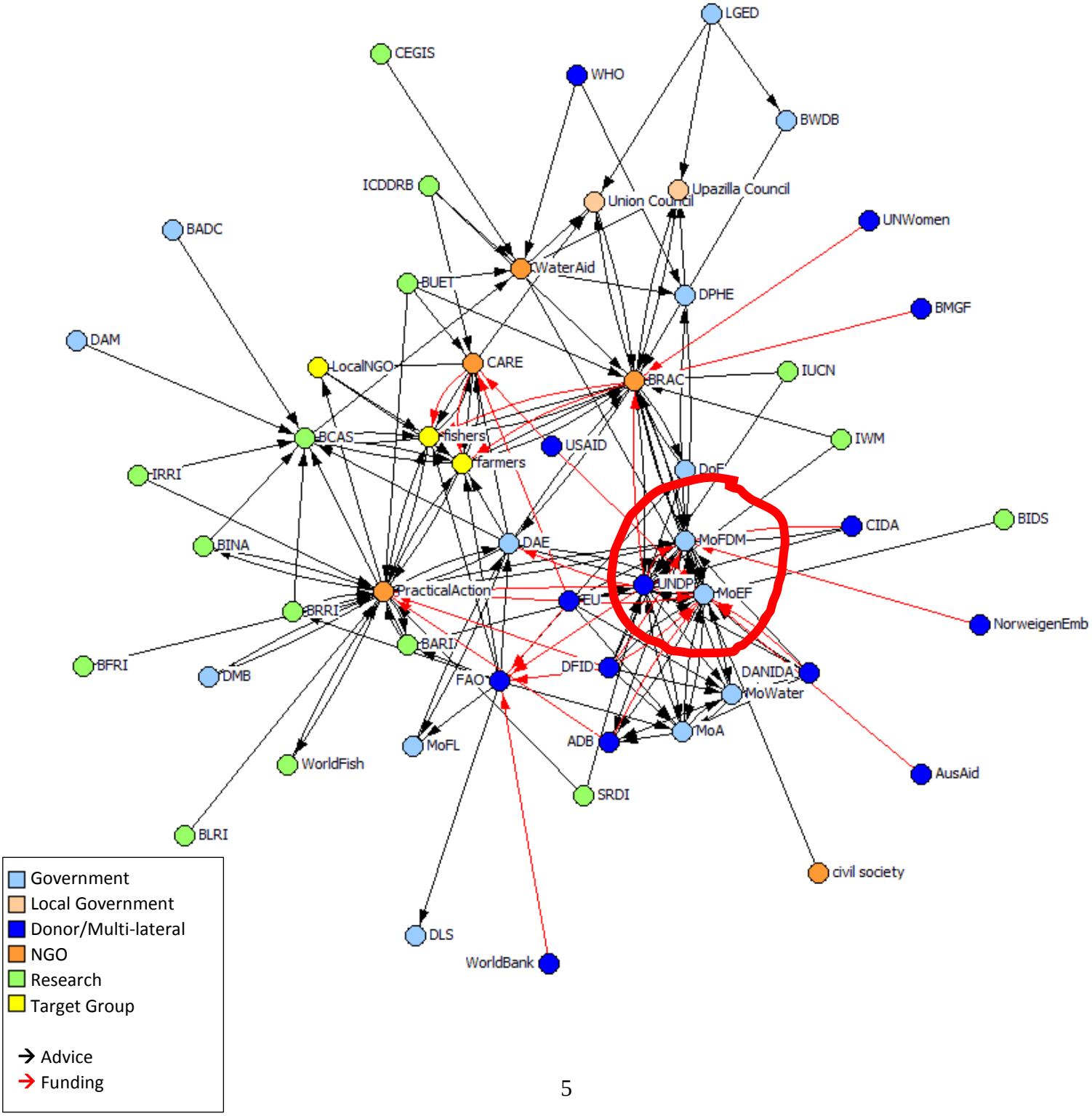
3 Lessons Learned

In addition to learning which organizations are currently active in this field and what their core activities are, we also determined the structural characteristics of the network that were relevant to this project's goals and heard contextual explanations of these characteristics from the interviewees. Because this information came from a small group of stakeholders, relative to the complete network, we do not consider this to be the decisive, complete policy network, but rather a snapshot of the landscape to provide guidance and insights on the policy process to the project. In this chapter we will describe the highlights learned in the mapping process, including some key actors and groups of actors, possible targets for research results, and other structural information about the network that could have implications for the project's communications and outreach.

The Network Structure

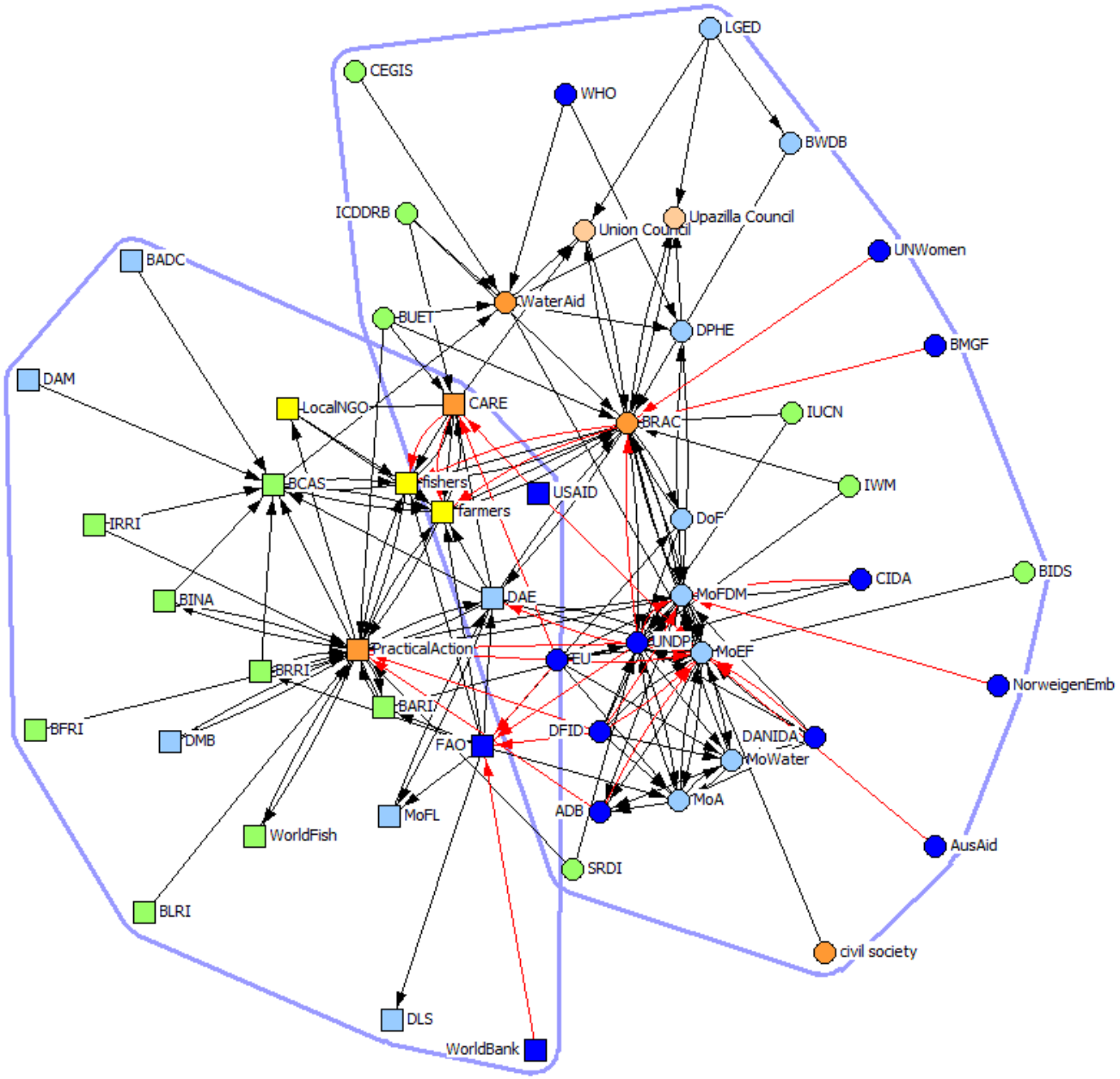
The complete network is depicted in Figure 3. Advice links and funding links are shown together and the actors are colored according to the type of organization. While the network structure is highly centralized, meaning that most actors have very few links and a few actors have many links, there is no single core—or center—to the network. There are actually a few different core actors, perhaps the most important of which are UNDP, MoFDM, and MOEF (see Annex 1 for list of actor acronyms) as they are also seen as highly influential (see Figure 6).

Figure 3: Complete Network



From the network structure we can also get a sense of two distinct clusters within the network. The clusters show a natural division of actors according to who is linked to whom; actors tend to engage more with those within their cluster than those outside their cluster. (The actors in the first cluster are depicted with a square and the actors in the second cluster are depicted as circles.) The majority of donors, multilaterals, and government actors are in the second cluster, while the first cluster is largely dominated by research organizations.

Figure 4: Network Clusters



Target Groups

Given that climate change adaptation by definition is based on target groups learning from their experience of climate change impacts and adapting their behaviors, we have separated those actors who are directly engaging with farmers and fishers in Figure 5. (While these are certainly not the only actors engaging directly with farmers and fishers, these were the links that the interview group was sure of.) In Figure 5 we can see that only BCAS, Practical Action, Care and BRAC are actually receiving advice on climate change adaption from farmer and fishers as well as providing it.

Some of the details about the activities of the organization engaging with fishers and farmers came out in the discussion:

- BCAS has a variety of ongoing adaptation-related projects. Some of these include a 5-country project on planning for agricultural adaptation to climate change, relating food and nutrition security to climate change, addressing water security for men and women including empowering women to deal with water scarcity due to climate change, and working on local small-scale adaptation strategies.

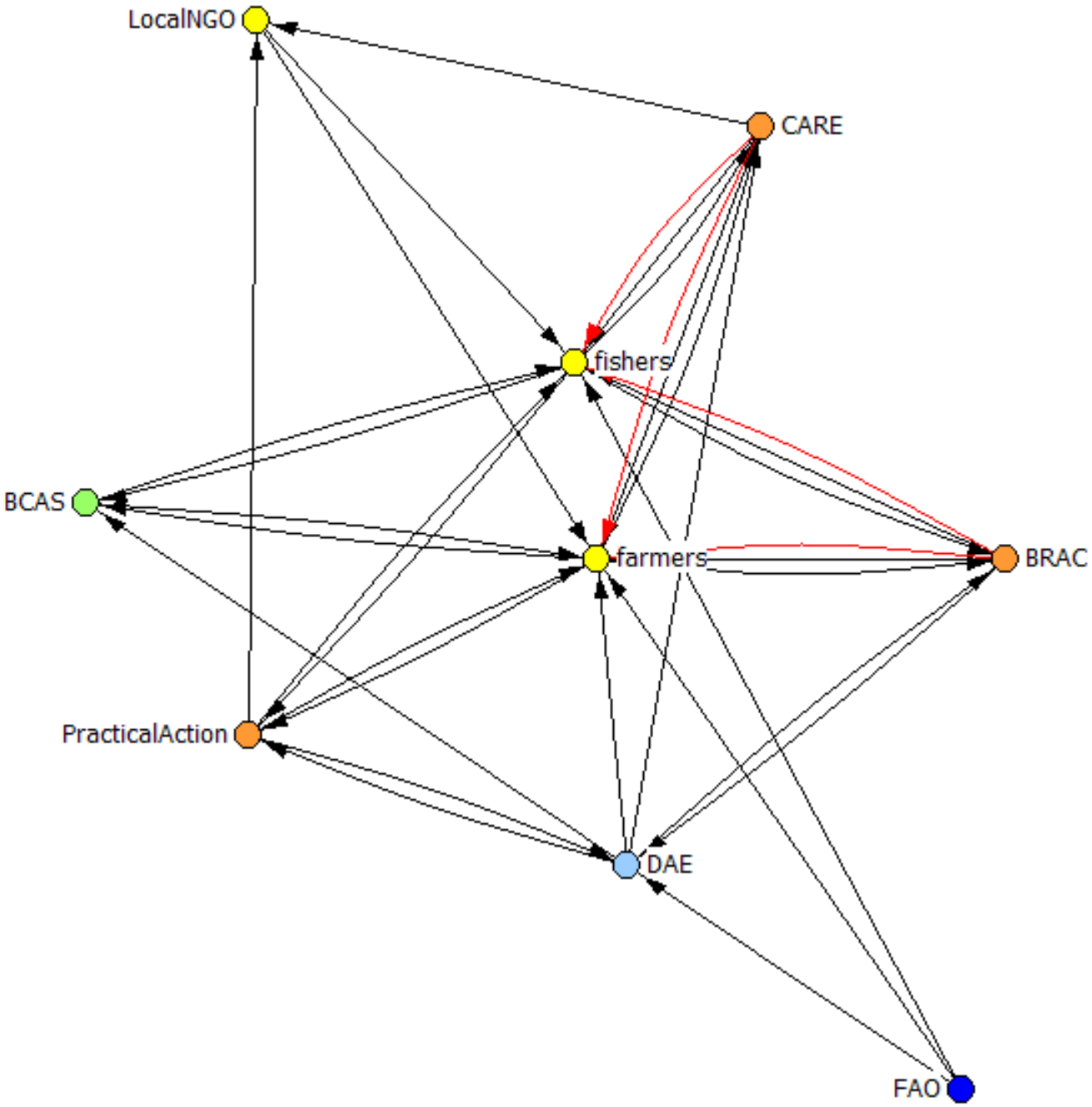
- BCAS has worked to identify water scarce areas in 5 ecosystems and is working on raising awareness of and knowledge about climate change within these areas. Some of their projects identified and involved women who are collecting and managing water.

- BRAC is implementing a project that focuses on early warning systems in the vulnerable areas. This is being done in 'real time', with people posted in villages constantly updating information about climatic changes. The project also provides capacity building to villagers, addresses climate change adaptation approaches involving the community, and salinity erosion. BRAC has built 47 climate resilient houses and cyclone centers in one of the most vulnerable areas of Bangladesh, Padmapukur. It also provides some amount of emergency assistance in cases of climactic crises.

- CARE developed a Climate Vulnerability and Capacity Assessment Tool to that it uses at the community level. They also conduct research on saline-tolerant crops and raise awareness of them at the community level.

- Practical Action deals with adaptation and biodiversity in Satkhira through natural resource management and biodiversity in agriculture and aquaculture for reducing the negative impacts of climate change. It has introduced flood tolerant and salinity tolerant rice, and is trying to incorporate technology in adaptation practices.

Figure 5: Target Groups

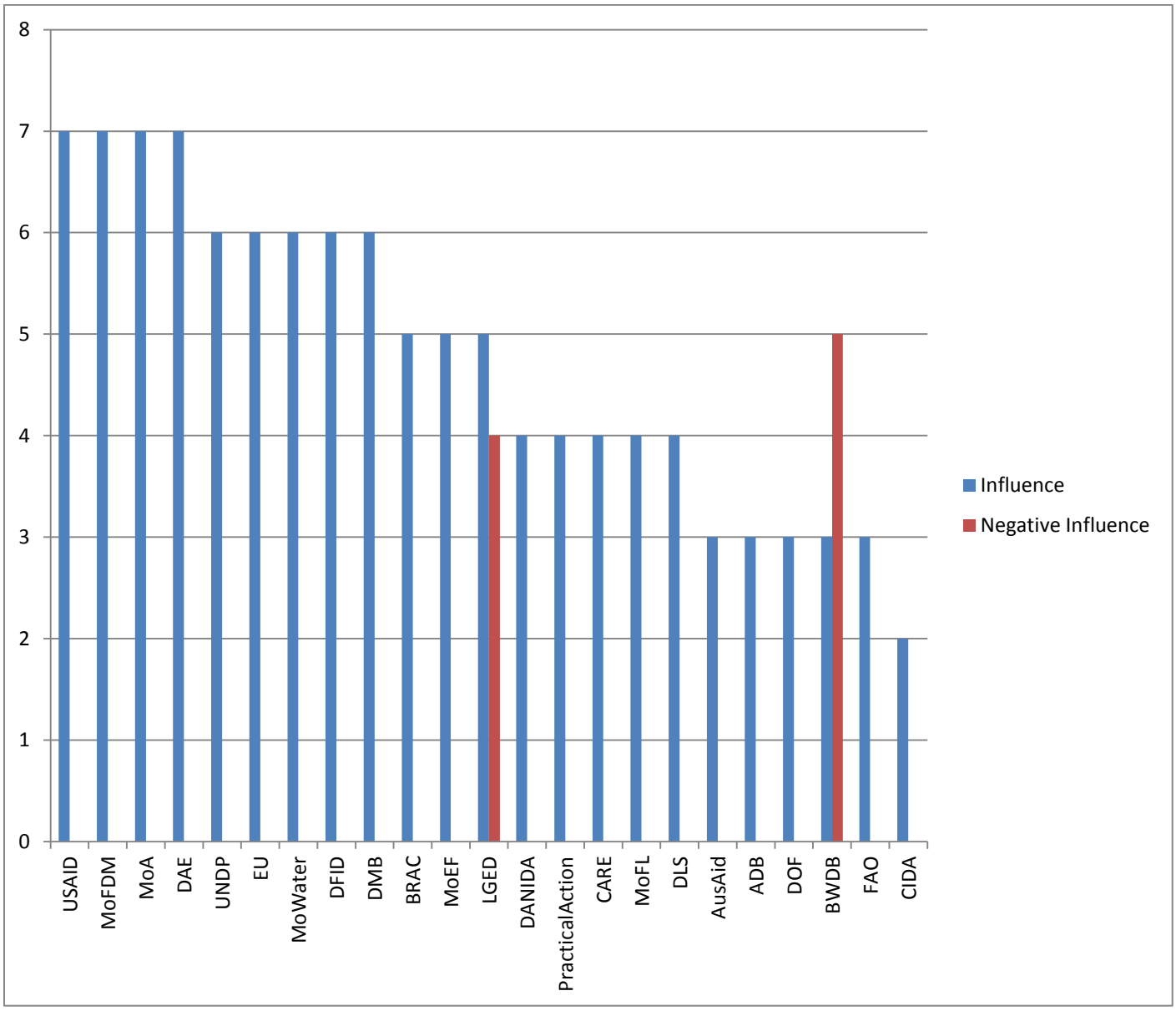


Influence

Interview partners were asked to rate the degree of influence each actor on the map has over improving climate change adaptation in Bangladesh. We defined influence as the ability to produce an outcome (make something happen) even in the face of resistance. Figure 6 shows the influence scores attribute by the workshop participants. In addition to the

influence in improving climate change adaptation, the workshop participants noted that some actors also have the ability to negatively influence adaptation efforts and provided scores for negative influence when relevant.

Figure 6: Actor Influence



The highly influential government actors in climate change adaptation were seen as the MoFDM and MoA (and DAE within MoA). MoFDM was seen as important due to the Comprehensive Disaster Management Programme (CDMP) housed within this ministry. The CDMP is a program explicitly designed to promote adaptation in the face of natural disasters and is meant to play a coordinating role in the government for adaptation activities. However, workshop participants noted that it is not as successful in this coordinating role as it could be. The MoA on the other hand, is not mandated to address adaptation but because of its significant capacity—through the DAE—to work directly with farmers providing advice and other support, it is seen as highly influential in improving the ability of farmers to adapt. Interestingly, the MoEF and specifically the Department of Environment, while mandated to work on climate change issues, was not seen as influential in climate change adaptation due to a lack of capacity, especially manpower.

Two key government bodies—the LGED and the BWDB—are seen to play a critical role in supporting climate change adaptation through the development of infrastructure and management of water resources, respectively. However, they are also seen as susceptible to mismanagement of their power, for instance developing infrastructure for the benefit of specific private interests rather than for small farmers generally. As such, these two bodies were seen as being capable of both positive and negative influence.

4 Conclusions

Climate change has become a key concern at the government level. Some of the participants thought that the creation of the Bangladesh Climate Change Trust Fund (BCCTF) with a handsome ($100 million) budget for addressing various climate change related issues is a reflection of the Government of Bangladesh taking climate change concerns seriously. However, in spite of its prioritization, there remain barriers and challenges to improving adaptation in Bangladesh. These include limited participation of small farmers and fishers, inadequate coordination and shared concepts for adaptation, and some examples of corruption or mismanagement. Some opportunities for engagement were raised including a variety of research networks working on adaptation and an emphasis on a *2-pronged approach* focusing both on ground-up engagement and policy-level engagement.

Interviewees noted that not enough is being done to inform and include the actors who are directly involved in climate change adaptation, namely the farmers and fishers. While some of the participating NGOs mentioned their inclusive approaches and on-going programs, the general concurrence was that information from these engagements does not feed into policy decisions and that the government should be more active in including input from small-scale farmers and fishers in policy decisions.

While there is a lot of emphasis on improving climate change adaptation within Bangladesh, one of the key barriers noted was the lack of coordination of activities. Underlying this lack of coordination was the observation that there are many different perspectives on what constitutes climate change adaptation and how it is defined. Because there is not an accepted definition of climate change adaptation among stakeholders, many different types of development programs are considered to also address adaptation without clear agreed-upon parameters for what is considered adaptation. BCAS noted that they are working on coming up with criteria that will help identify projects directly related with climactic concerns.

Another critical barrier described was that of private business interests that often take precedence over those of small holders and small fishers, even to the extent of capturing government resources for private interests. Some ministries and departments were identified as having negative influences as the participants believed that they are currently extracting resources and mismanaging funds with a negative impact on climate change adaptation. Local political leaders and businessmen were seen as having the potential to influence adaptation outcomes, but it was unclear whether this would be a positive or negative influence.

Workshop participants emphasized that IFPRI dissemination should have a two-pronged focus; reaching out both to the national policy actors, especially the core government actors and the highly influential donors and multilaterals, and also to the target communities. Many NGOs appear to be engaging with the target communities and these activities could be built upon. In addition, a lack of quality research capacity on climate change adaptation was noted and it was emphasized that building this capacity would be key for future responses.

A number of research networks are already established where different research organizations share and disseminate their findings on various climate change-related issues. They are often approached by different government ministries and departments for advice, but most of the research organizations have yet to play an influential role at the policy level. Some examples include the Action Research on Community-based Adaptation Project (ARCAP), in which BCAS is playing a key role. This research network includes a number of national and international NGOs, academic institutes of Bangladesh, and local and international research organizations among its members. ARCAP was seen as engaging at the policy level, thought it was not clear to what extent. BCAS is coordinating another forum called climate change development forum. It is in consultation and discussion with BIRRI, BARI, DAM and DAE for future costing of the agricultural sector overall.

Annex 1 - Actor Acronyms and Characteristics

Actor	Full Name	Type	Influence	Notes
ADB	Asian Development Bank	multi-bi lateral	3	Has completed capacity development on climate change with several ministries and NGOs. Is also working on developing crops better suited to climate change conditions.
AusAid	Australian Government Overseas Aid Program	multi-bi lateral	3	Mentioned in the discussion, but was not identified as an actor.
BADC	Bangladesh Agricultural Development Corporation	Government	na	BADC does research on multiplying the saline resistant crops/seeds, fertilizers, irrigation and soil resources. Involved in CC adaptation through research.
BARI	Bangladesh Agricultural Research Institute	Research	na	Involved in CC adaptation through research.
BCAS	Bangladesh Center for Advanced Studies	Research	na	BCAS in BD is working with government officials and policy makers for developing and identifying criteria to distinguish between projects that are on CC adaptation. Projects that provide climactic information like rainfall, drought, flood, salinity etc. – can be identified as adaptation project. BCAS is seriously involved in a network of research called 'Action Research on Community based Adaptation project' – ARCAP, involving international NGOs, national institutions, academic institutes, regional level and other international level organizations. This has some influence at the policy level. BCAS is coordinating another forum called climate change development forum. BCAS is feeding the learning process worldwide.
BFRI	Bangladesh Fisheries Research Institute	Research	na	
BIDS	Bangaldesh Institute of Development Studies	Research	na	No significant direct research or influence on climate change, but as a significant research institute of Bangladesh, may play some role in the future.
BINA	Bangladesh Institute of Nuclear Agriculture	Research	na	A network of different research organizations.
BLRI	Bangladesh Livestock Research Institute	Research	na	
BMGF	Bill	multi-bi lateral	na	
BRAC	Bangladesh Rural Advancement Committee	non-governemntal organizations	5	Has several projects on capacity building at the root level involving village people, climate change adaptation approaches involving the community, and establishing early warning systems. Implementing three or four new approaches with real time information. They have 47 climate resilient houses and cyclone centers in one of the most vulnerable areas of Bangladesh. Salinity erosion and emergency assistance in cases of climactic crises, desalination plant etc. are also some of the foci. Highly influential actor.
BRRI	Bangladesh Rice Research Institute	Research	na	Not yet a significant actor.
BUET	Abangladesh University of	Research	na	Provides technical advice in some instances, but not a consistent participant or actor in CC adaptation.

	Engineering Technology			
BWDB	Bangladesh Water Development Board		3/-5	They give early warning information about floods. They are influential but are seen as corrupt so are also seen as having negative influence. There are some complaints from the poor communities about badly-made embankments they make.
CARE	CARE Bangladesh	non-governemntal organizations	4	Climate Vulnerability and Capacity Assessment Tool – developed by CARE. Impact on community level, rainfall variability, food security and migration linked with CC. Saline tolerant crops and raised awareness at the community level
CEGIS	Center for Environmental and Geographic Information Services	Research	na	
CIDA	Canadian International Development Agency	multi-bi lateral	2	Has been mentioned by the participants as a source of funding for research/projects on CC adaptation, but their exact role or contribution was unclear.
Civil society				Not yet a strong or influential actor as there is no single group that can be the representative of BD civil society. Some organizations voice concern about CC and wetlands, but is not organized.
DAE	Department of Agriculture Extension	Government	7	DAE disseminates the generated knowledge. DAE is not doing the research. They give advice to farmers on drought and saline tolerant crops and water management systems. They are one of the few government bodies with a very high capacity (many people working directly with farmers).
DAM	Department of Agricultural Marketing	Government	na	
DANIDA	Danish International Development Agency	multi-bi lateral	4	They put a lot of funding into climate change work in Bangladesh.
DFID	Department for International Development	multi-bi lateral	6	They put a lot of funding into climate change work in Bangladesh. They also have impact on policy dialogue.
DLS	Directorate of Livestock Services	Government	4	Potentially strong actor, but their involvement is not extensive yet.
DMB	Disaster Management Burea	Government	6	Influence in local areas due to work similar to the CDMP. (WHAT WORK?)
DOF	Department of Fisheries	Government	3	Potentially strong actor, but their involvement is not extensive yet.
DPHE	Department of Public Health Engineering	Government	na	DPHE has lots of work related to safe water tubewells, salinity, arsenic problem etc.
EU	European Union	multi-bi lateral	6	Mentioned to be the source of funding to many organizations, but was not specified to whom.
FAO	Food and Agriculture Organization	multi-bi lateral	3	FAO's role in funding and developing agricultural technology is related to climate change adaptation. They work with DAE and NARS. Some of their projects involve coastal fishermen for strengthening capacity and empowerment.
farmers				Approached and somewhat included by some organizations like BRAC, FAO, Practical Action, Water Aid etc. but not to any significant amount. Should be considered seriously for any CC adaptation measures.

fishers				Approached and somewhat included by some organizations like BRAC, FAO, Practical Action, Water Aid etc. but not to any significant amount. Should be considered seriously for any CC adaptation measures.
ICDDRB	International Center for Diarheal Disease Research		na	They had some research done about health impacts of CC.
IRRI	International Rice Research Institute	Research		Mentioned as potential actor, but does not have much emphasis on CC as of yet.
IUCN	International Union for Conservation of Nature	Research	na	
IWM	Institute of Water Modeling	Research	na	Has strong capability in research, potentially strong actor for advice and CC predictability.
LGED	Local Government and Engineering Department	Government	5/-4	They are a very influential organization in terms of developing infrastructure in rural areas and have plenty of manpower and expertise on climate change adaptation. They also have good connections with highly powerful political leaders. So there are perceptions of corruption that give them negative influence.
LocalNGOs	various local NGOs	non-governemntal organizations	na	NGOs in general are seen as potential actors in influencing CC adaptation practices as they have good grassroots level networks.
MoA	Ministry of Agriculture	Government	7	They are the policymakers for the activities that DEA implements in support of farmers.
MoEF	Ministry of Environment and Forests	Government	5	The ministry itself is not so relevant for climate change adaptation. The key body within the ministry is the Department of Environment. They do not have sufficient manpower.
MoFDM	Ministry of Food and Disaster Management	Government	7	Within the ministry, the CDMP (The Comprehensive Disaster Management Programme, Phase II) has a strong network working on climate change adaptation.
MoFL	Ministry of Fisheries and Livestock	Government	4	While they have policies relevant to climate change adaptation they have very little manpower and so are not seen as highly influential.
MoWater	Ministry of Water Resources	Government	6	It is dependent on Water Board and WARPO, but separately they are influential in terms of policies.
NorweigenEmb	Norwegian Embassy	multi-bilateral	na	(Not so relevant/important)
PracticalAction	Practical Action	non-governmental organizations	4	Although practical action is technology based, they do research too. Working on climate change issues since 2001. Practical Action is implementing projects that directly engage farmers and fishers, sometimes through local NGOs, with components on agriculture, aquaculture and biodiversity.
SRDI	Soil Resource Development Institute	Research	na	
UNDP	United Nations Development Programme	multi-bilateral	6	
Union Council	Union Council	local government	na	Potentially an influential actor as government funds are usually disbursed through union and upazilla councils and these local government bodies are likely to have the capacity to reach and include local community people

				in awareness building and program implementation regarding CC adaptation. Union Council Chairman is elected and is highly influential in the locality.
UNWomen	United Nations Women	multi-bi lateral	na	(Not so relevant/important)
Upazilla Council	Upazilla Council	local government	na	High potential to significantly contribute in CC adaptation processes and CC related projects. Would benefit from more intervention in human capacity development from the government, but already has some capacity in reaching and involving local farmers and fishermen in the Upazillas. The government projects usually have to include the Upazilla Chairman for implementation, fund allocation and other logistical services. Upazilla Chairman is elected and is highly influential in the locality.
USAID	United States Agency for International Development	multi-bi lateral	7	Provides funding for projects on CC to other organizations and NGOs.
WaterAid	Water Aid	non-governemntal organizations	na	Conduct information studies – hot spots of scarce water, approach of CC adaptation – started 4 projects, trying to engage the local govt. They are at an early phase of dealing with climate change. Conducting several studies for identifying hot spots in terms of scarcity of water. Several locations in coastal areas and Char areas. Attempting to come up with bottom up approaches and strategies of climate change involving local government and community people. Some climate resilient technology is being researched.
WHO	World Health Organization	multi-bi lateral	na	
WorldBank	The World Bank		na	Briefly mentioned in the discussion, but participants had the opinion that it is not yet an actor in CC adaptation.
WorldFish	WorldFish	Research	na	Has several projects on CC and food security but yet to emphasize more on those issues.

I. Annex 2: Net-Map Interview Guide

Overview of Project and Interview Process:

Overview of the project: Our project aims to strengthen the capacity of rural households, communities and development agencies to manage risks under climate change. To support this goal, we need to identify the stakeholders who work in the area of climate change adaptation and understand how they link up as well as how they work with rural smallholders to help us implement research and identify research message delivery modes that can make a real difference for both the organizations involved in climate risk management as well as the rural poor.

Net-Map is an interview technique that examines the power, goals and perspectives of various stakeholders, and looks at how these stakeholders interact with each other. We will start by listing all the actors involved in climate change adaptation for rural smallholders at the national level, determine how they are linked, examine how influential each actor is in this area, and examine the approaches used to make an impact for rural smallholders.

One thing about Net-Map is that we will look at how things are actually done on the ground and not only what is written in formal documents. This is why we need the insight of people like you, who are part of the process and know it from the inside.

Who is influential in improving the ability of small-holder farmers and small fishers to adapt to climate change risk?

Step 1: Determine Actors

Who plays a role in improving climate change risk management and adaptation for smallholder farmers and small fishers?

- Focus on national-level.
- Actors are pre-written on cards, according to scoping research and pre-testing. Prompt the interview partners to choose from the list of actors if they are involved in the network, or to add to the list by writing new actors. (Add a few blank cards underneath the pre-listed actors.)
- Actors do not have to be highly influential, but they do have to be "involved" in climate change work.
- Place actors on flipchart sheet, in no particular order.

Step 2: Drawing links between actors

2.a For each actor on the board, who gives advice to who on climate change adaptation and risk management issues?

2.b For each actor on the board, who provides funds to who related to climate change risk management and adaptation?

Explain the definition of advice, below, and then draw arrows between actors to show who regularly seeks advice from whom. Give each advice link a score from 1 to 3 to denote the frequency/intensity and importance of advice received.

1: no indication of the value of the advice to the recipient; very infrequent correspondence, down to a few times a year; not direct contact, perhaps an invitation to a meeting or event.

3: advice is valued and even sought-after; frequent, even daily correspondence; direct contact, even face-to-face meetings

- Advice is information given with the intention to recommend some action. This could include: policy advice, technical advice, research-based advice, programming advice, advice on implementation. It could be initiated by the advisor or the recipient.
- Advice should only be related to climate change adaptation and directly related issues, not on any other topics.
- Request examples observed by participants, but do not insist if respondent is resolute about the presence of the link.

Step 3: Attribute influence

How influential is each actor in ensuring that small-holder farmers and small fishers are able to successfully adapt to climate change impacts? The scale is 0-6.

- Define influence:
  - We refer to the current state of influence, not a possible future level of influence over the issue.
  - Ask the interview partner *"what are different ways someone could influence **climate change risk management and adaptation for smallholder farmers**?"*
    - Ways of influencing include, but are not limited to: formal supervision, funding, technical information, advice, advocacy, ability to exert policy pressure,traditional authority, being highly knowledgeable or respected.
- Attribute influence:
  - First ask the influence level of each actor quickly, starting with the most influential actor(s).
  - Then go back and ask them to explain each one. Ask the respondent to discuss "Where does their influence come from and how do they use it?" for each actor.

Step 4: Discussion

- **Are there any actors that disagree on adaptation strategies or may even be in conflict or strong competition? What issues to they disagree/conflict on?**
- **What are the critical channels to get our research information to target groups (those who make policies and run programs)?**
- **What were the most striking things you observed or learned while drawing at this map?**

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