



INITIATIVE ON

Transforming Agrifood
Systems in South Asia

TAFSSA Stakeholder Mapping

Climate change adaptation
policy and awareness in
Bangladesh

Research Note 29
October 2024

1. INTRODUCTION

Building on insights from the network mapping workshop, this analysis provides a comprehensive perspective on Bangladesh's climate adaptation network within the agrifood system, including the crop, livestock, and aquaculture sectors. The study presents a high-level understanding of the diverse stakeholders—organizations, institutions, and individuals from both the public and private sectors—who play critical roles in the stewardship of land and water resources and the promotion of climate adaptation strategies. The central research question guiding this mapping exercise is: Who are the primary organizations, institutions, and individuals in the public and private sectors that influence land and water resources conservation and climate change adaptation, with a focus on agricultural production, marketing and consumption systems in Bangladesh? Through this analysis, we aim to explain the interconnected patterns that emerge within the climate adaptation sub-system, identifying the pivotal drivers, persistent barriers, and systemic gaps that shape stakeholder interactions. These insights are critical to identifying actionable intervention points that can lead to meaningful and sustained transformation across the agrifood system, ultimately supporting enhanced resilience, nutritional outcomes, and adaptive capacity in the face of climate change.

2. METHODOLOGY

This study employed a structured methodology, comprising a day-long workshop held on June 15, 2023, in Dhaka, designed to engage key stakeholders in Bangladesh's climate adaptation network. The workshop included 15-16 participants, representing government bodies such as the Water

Development Board, Bangladesh Rice Research Institute (BRRI), and Bangladesh Agricultural Research Institute (BARI), as well as NGOs and INGOs with a climate adaptation focus, including International Centre for Climate Change and Development (ICCCAD,) GIZ, and BRAC. Participants from the private

4. ACTOR HIGHLIGHTS

GOVERNMENT

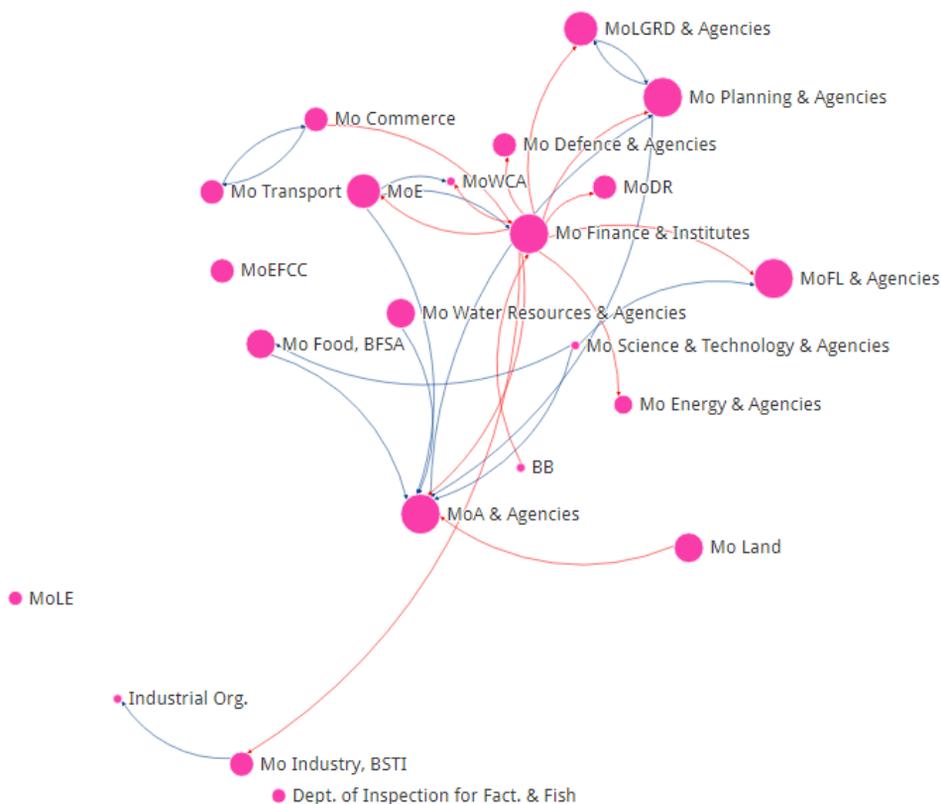


Figure 2: Government actors and connections

The network map (Figure 2) illustrates the roles of various Bangladeshi government ministries and agencies in climate adaptation, particularly concerning land and water resource conservation. Key actors include the Ministry of Agriculture (MoA) and its agencies like the Department of Agricultural Extension (DAE), National Agricultural Research System (NARS), Bangladesh Agricultural Development Corporation (BADC), and Department of Agricultural Marketing (DAM), which are central to building a climate-resilient agriculture system. The MoA's reliance on the Ministry of Finance (MoF) and the Palli Karma-Sahayak Foundation (PKSF) for funding underscores the importance of

financial support for these initiatives.

The Ministry of Planning (MoP), with agencies like the Bangladesh Institute of Development Studies (BIDS) and Bangladesh Bureau of Statistics (BBS), integrates climate adaptation into development planning, ensuring alignment with sustainable growth. The Ministry of Fisheries and Livestock (MoFL), including the Bangladesh Livestock Research Institute (BLRI) and Bangladesh Fisheries Research Institute (BFRI), promotes climate-resilient practices in livestock and fisheries. However, limited connections with other ministries indicate potential areas for improved collaboration.

The Ministry of Environment, Forest, and Climate Change (MoEFCC) leads the National Adaptation Plan and allocates funds for agricultural adaptation, though its isolation from operational ministries like MoA suggests challenges in policy execution. The Ministry of Food (MoF) and Bangladesh Food Safety Authority (BFSA) work on climate-tolerant food storage, yet have limited links to production agencies, which may impact holistic food security efforts.

The Ministry of Local Government, Rural Development, and Cooperatives (MoLGRD), through the Local Government Engineering Department (LGED) and Bangladesh Academy for Rural Development (BARD), focuses on rural resilience.

Overall, while the government’s multi-actor approach addresses climate adaptation in agriculture, gaps in inter-ministerial coordination could impede effective implementation. Enhanced collaboration among MoA, MoEFCC, and MoF is crucial for a unified climate resilience strategy.

5. ACTOR HIGHLIGHTS DONORS, DEVELOPMENT PARTNERS, CGIAR AND CIVIL SOCIETY

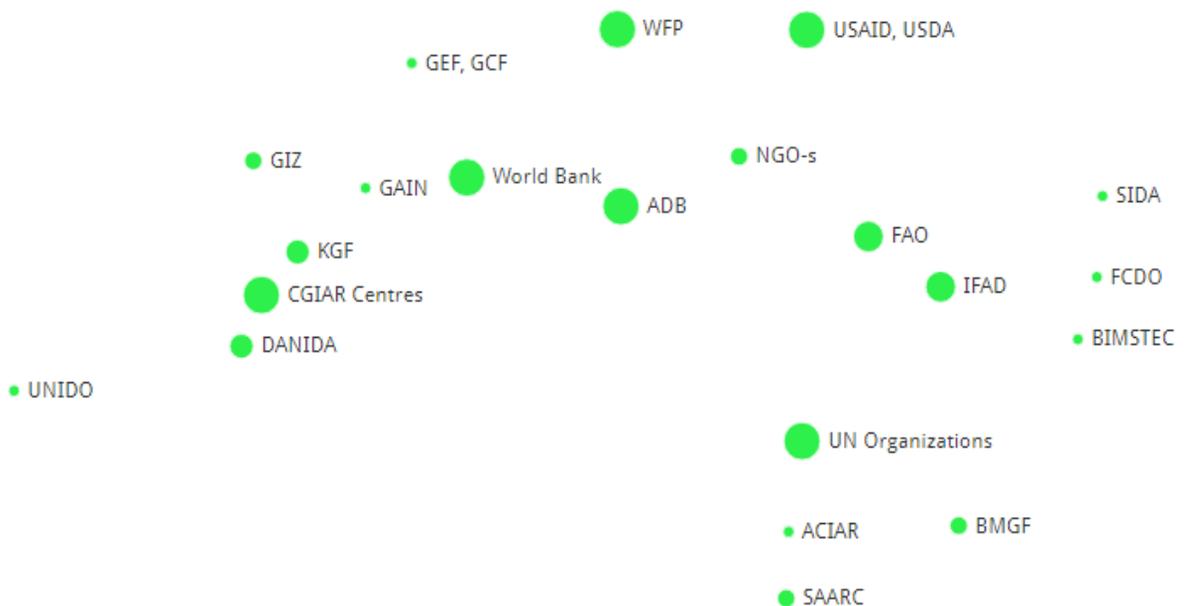


Figure 3: Donors, development partners, CGIAR, civil society actors and connections

The donor, development partner, and civil society landscape in Bangladesh’s climate adaptation sector comprises a range of prominent international organizations, research institutions,

and NGOs/INGOs. These entities play a pivotal role in supporting climate adaptation and resource conservation efforts, particularly within the agricultural sector. Among the major

donors, the World Bank, Asian Development Bank (ADB), and United States Agency for International Development (USAID) are key contributors, offering financial and technical assistance across a variety of projects focusing on climate adaptation, sustainable agriculture, water resource management, and rural infrastructure. UN organizations, including the United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP), further enhance this landscape through their extensive programs aimed at building resilience to climate change impacts.

Research institutions affiliated with CGIAR, such as the International Rice Research Institute (IRRI), CIMMYT, International Food Policy Research Institute (IFPRI), and International Potato Center (CIP), are critical for advancing climate-resilient crop development and promoting sustainable agricultural practices tailored to the challenges posed by climate change. These research centers contribute significantly to building adaptive capacity within Bangladesh's agricultural sector by developing technologies and solutions that can withstand climatic stresses.

Additionally, organizations such as the World Food Programme (WFP) address the intersecting challenges of food security and climate adaptation, working to improve agricultural practices and livelihoods for vulnerable communities affected by climate variability. Civil society actors, including both local and international NGOs, complement these efforts by implementing projects at the community level that focus on

resilience-building and resource conservation.

Despite the critical roles these donors and partners play, the network map generated by the Net-Map exercise does not display the connections among these entities, primarily due to the selection bias of workshop participants. This lack of visualized linkages does not accurately reflect the actual collaboration patterns, as many of these organizations, such as USAID, Australian Centre for International Agricultural Research (ACIAR), Foreign, Commonwealth & Development Office (FCDO), and Swedish International Development Cooperation Agency (SIDA), maintain strong partnerships with NGOs, INGOs, and UN agencies working on climate change and resource conservation. In practice, these actors collaborate closely, often funding projects led by NGOs and providing technical assistance to support the Bangladeshi government's climate adaptation objectives.

In summary, these international donors, development partners, and civil society actors contribute significantly to Bangladesh's climate adaptation and resource conservation efforts. Their work reinforces the country's capacity for climate resilience, particularly in the agrifood sector, where their support helps to bridge resource and technical gaps, enhancing agricultural sustainability and community resilience.

6. ACTOR HIGHLIGHTS

RESEARCH ORGANIZATIONS, EDUCATIONAL INSTITUTES



Figure 4: Research organizations and educational institutes.

The research and educational landscape within Bangladesh's climate adaptation sector (Figure 4) includes several key organizations that contribute to policy, research, and technical support, particularly in water resources, environmental sustainability, and agriculture. Leading institutions in this area include the Institute of Water Modelling (IWM), the Center for Environmental and Geographic Information Services (CEGIS), and the Bangladesh Centre for Advanced Studies (BCAS). These organizations provide critical insights and data to inform climate adaptation policies and practices, focusing on sustainable water resource management, environmental

protection, and agricultural resilience.

Additionally, the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and the International Centre for Climate Change and Development (ICCCAD) play significant roles in public health and climate change research, contributing to an understanding of climate impacts on health and informing adaptation strategies. International organizations like the World Health Organization (WHO) and WorldFish complement these efforts by offering technical expertise and global perspectives on climate-related health risks and sustainable fisheries.

It is important to note that CGIAR centers, which also function as research institutions, were included in the previous sections. Therefore, their connections are not visible on this map, although they contribute substantially to climate-resilient agricultural research.

However, the map indicates limited interlinkages among these research institutions and with other key actors, possibly due to participant selection bias in the mapping exercise. This absence of visual connections does not necessarily reflect the actual

collaboration landscape, as these institutions often work closely with government agencies and development partners.

In summary, while research organizations and educational institutes hold foundational roles in Bangladesh's climate adaptation efforts, the observed lack of interconnections suggests areas for stronger collaborative frameworks. Enhanced linkages could lead to more integrated and impactful approaches to climate resilience within the agrifood and environmental sectors.

7. ACTOR HIGHLIGHTS

PRIVATE SECTOR

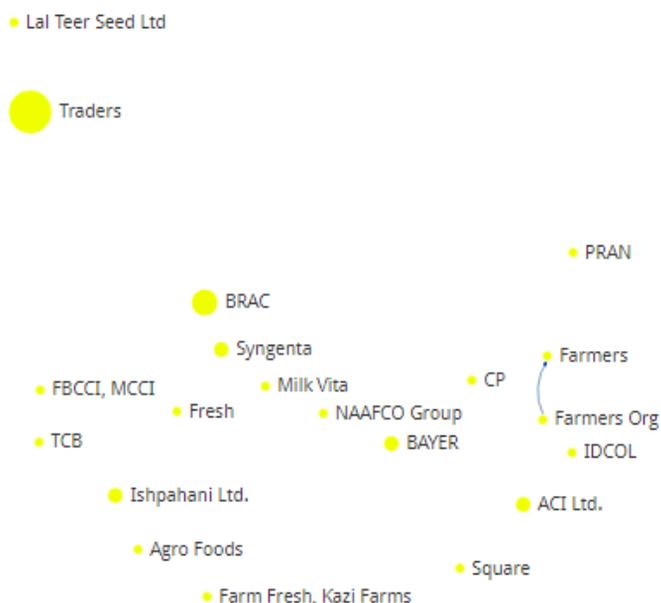


Figure 5: Private sector actors

The private sector in Bangladesh has a substantial, yet often underrecognized, role in shaping land

and water resource conservation and facilitating climate change adaptation within the agricultural sector (Figure 5).

Companies involved in seed production, agrochemicals, food processing, and retail—such as Lal Teer Seed Ltd, Syngenta, PRAN, and ACI Ltd—directly influence agricultural practices by determining the quality, affordability, and availability of key inputs essential for climate-resilient farming. For instance, Lal Teer Seed Ltd contributes to adaptation by developing and distributing high-yield, climate-resilient seed varieties that help farmers cope with changing climatic conditions. Similarly, organizations like BRAC and Square Pharmaceuticals Ltd engage in community health and livelihood programs that support rural resilience and adaptive capacity, indirectly contributing to climate adaptation efforts.

Studies underscore that the private sector’s involvement in agrifood value

chains—from input provision to market access—profoundly affects farmers' choices around sustainable resource management, particularly in water and soil conservation. Through corporate outreach and training initiatives, private companies have the capacity to encourage sustainable practices among farmers, aligning agricultural production with climate adaptation goals. However, as the network map illustrates, the competitive and fragmented nature of the private sector can hinder cooperative approaches that might otherwise advance resource conservation and resilience across the sector. This lack of coordination reflects a missed opportunity for the private sector to collectively support climate adaptation in agriculture on a broader scale.

8. ACTOR HIGHLIGHTS OTHERS

- Business Owners
- Real Estate Agencies
- Electronic Media

Figure 6: Other actors

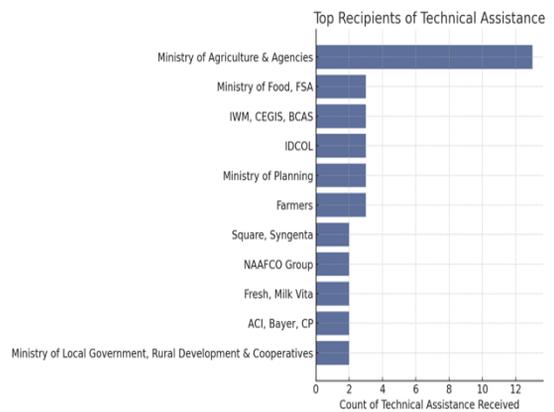
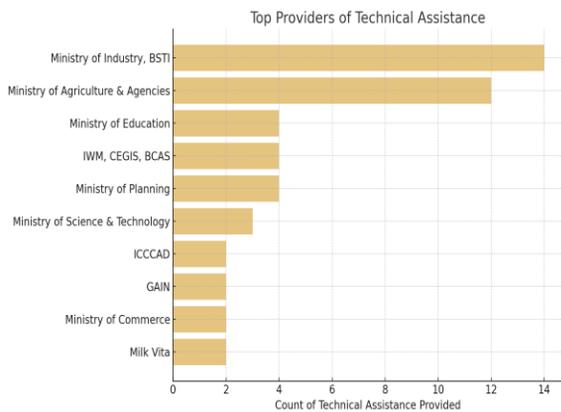


Figure 8 and 9 : Technical assistance providers and receivers

The technical assistance (TA) network in Bangladesh’s climate adaptation landscape includes a structured exchange of training, technical guidance, equipment, consultancy, evidence, and case studies, fostering capacity-building across various actors. The mapping exercise identified 63 distinct technical assistance connections (Figure 7) , highlighting key providers and recipients within this network (Figures 8 and 9).

Government actors emerge as the most prominent sources and beneficiaries of technical assistance. The Ministry of Industry and Bangladesh Standards and Testing Institution (BSTI) lead in providing technical support, with 14 connections, followed closely by The Ministry of Agriculture and its agencies (MoA & Agencies) with 12 connections. Other notable providers include the Ministry of Education, Institute of Water Modelling (IWM), Center for Environmental and Geographic Information Services (CEGIS), Bangladesh Centre for Advanced Studies (BCAS), and Ministry of Planning, each contributing through technical expertise and resources.

The primary recipients of technical assistance also tend to be government entities, with MoA & Agencies receiving the most support, connected through 13 links. Other significant recipients include The Ministry of Food and Bangladesh Food Safety Authority (FSA), IWM, CEGIS, BCAS, Infrastructure Development Company Limited (IDCOL), and Farmers. The presence of private sector actors, such as Square Pharmaceuticals, Syngenta, and NAAFCO Group, as TA recipients highlights the broader outreach of technical support across sectors, though their connections remain limited compared to government bodies.

This mapping of technical assistance underscores the critical role of government agencies as central nodes for both providing and receiving technical support, emphasizing their influence within the network. However, the limited connections among private sector actors suggest a potential gap in technical assistance distribution, pointing to an area for further engagement and collaboration to strengthen climate resilience across all sectors in Bangladesh

10. LINK HIGHLIGHTS FUNDING

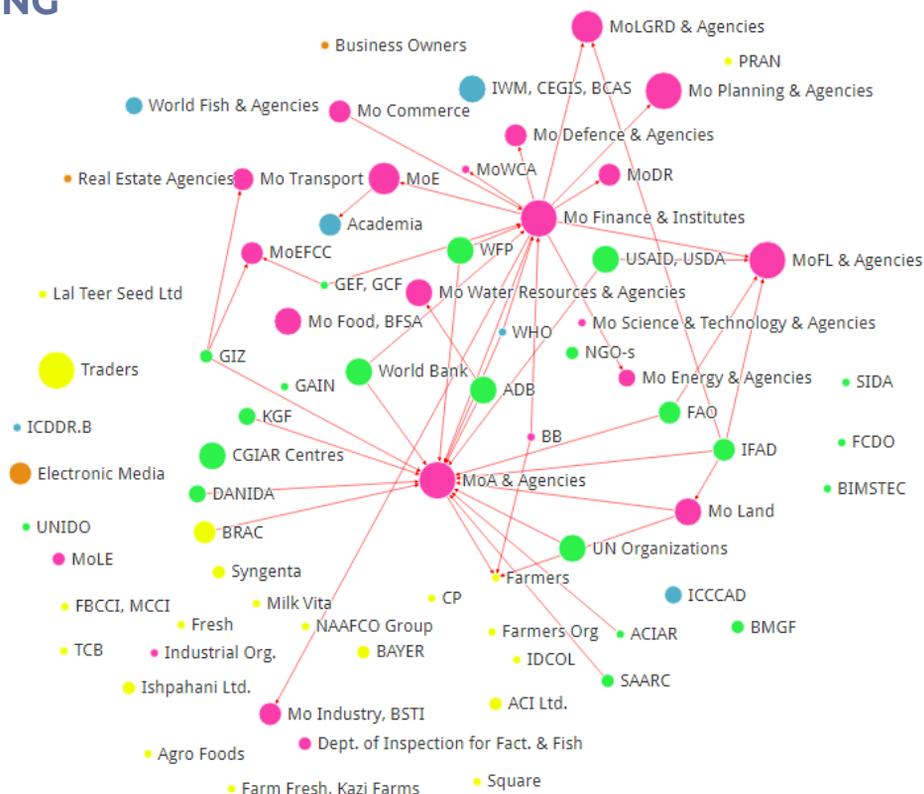


Figure 10: Funding connections

The funding network for climate adaptation in Bangladesh reveals how financial resources flow among key actors to support resilience and conservation initiatives. Within this network, 44 funding connections were identified (Figure 10), showing how funds move between providers and recipients (Figures 10, 11, and 12).

The Ministry of Finance and related institutions stand out as major funding sources, providing support through 10 connections. They are followed by international partners like the International Fund for Agricultural Development (IFAD) and GIZ, which help finance climate projects. Other contributors, including the World Bank, World Food Programme (WFP), World Health Organization (WHO), and USAID, also have multiple funding

links, showing a strong international commitment to Bangladesh's climate goals.

On the receiving end, the Ministry of Agriculture and its agencies are the main beneficiaries, with 16 funding connections. They are closely followed by Ministry of Finance, Ministry of Fisheries and Livestock, and Farmers, all of whom play crucial roles in implementing climate adaptation measures. Additional recipients, such as the Ministry of Local Government, Rural Development, and Cooperatives and the Ministry of Environment, Forest and Climate Change, emphasize the government's significant role as both funder and recipient in the climate network.

This pattern highlights the government's central role in managing

and deploying climate-related funds. While government agencies receive the bulk of funding, this network suggests an opportunity to diversify support and include more non-

governmental and private actors, ensuring that Bangladesh’s climate resilience efforts are truly comprehensive and far-reaching.

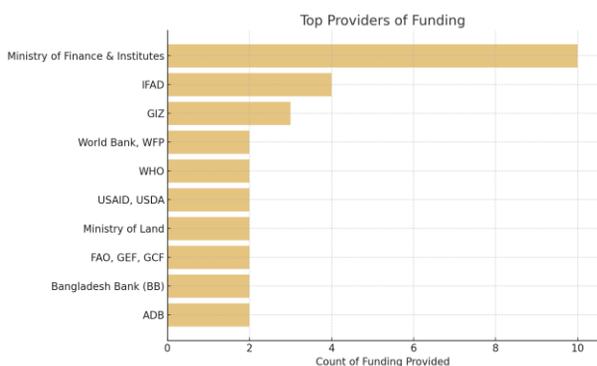


Figure 11: Top providers-funding

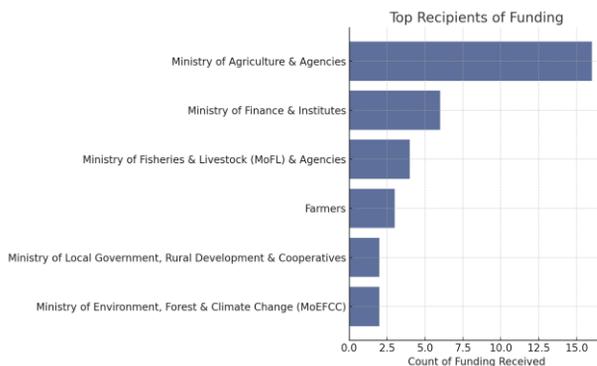


Figure 12: Top fund receiver

11. NETWORK OPPORTUNITIES AND CONSTRAINTS

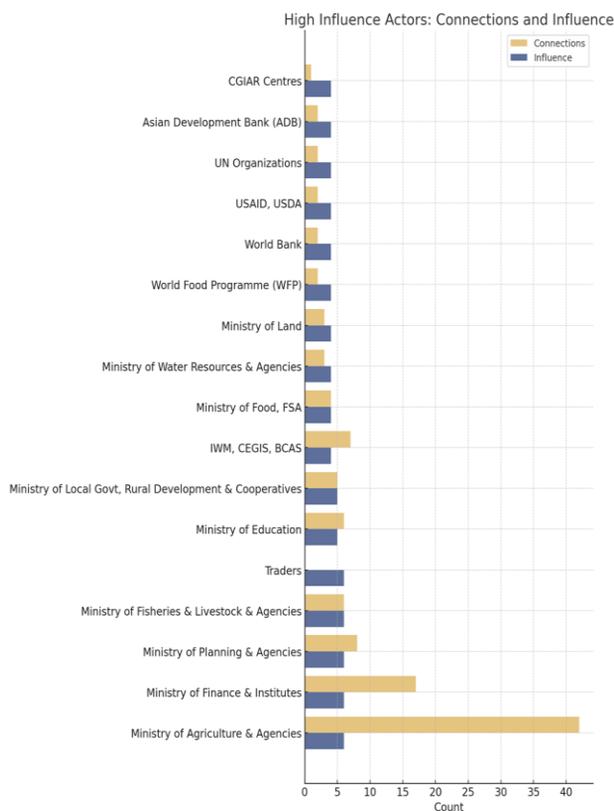


Figure 13: Connection and influence

The network structure illustrates that the government occupies a central role in Bangladesh’s climate-related policy and program implementation (Figure 13), acting as both a decision-maker and intermediary among various sectors. The Ministry of Agriculture (MoA), Ministry of Finance, and Ministry of Planning play key roles in shaping climate policies, coordinating resources, and developing frameworks to address climate impacts on agriculture. Their efforts are frequently influenced by initiatives from the Ministry of Environment, Forest and Climate Change (MoEFCC), which sets overarching environmental and climate goals. However, despite these efforts, challenges remain in translating policy into action. The government has developed a relatively comprehensive policy framework, but effective, on-the-ground implementation remains limited. As noted, “government ministries and agencies do not have a clearly visible action plan,” indicating a gap between

policy formulation and practical application. Although the MoA attempts to implement regulatory measures, these efforts face substantial obstacles.

The private sector is perceived as a less engaged player in climate adaptation efforts. While the sector's market-driven focus contributes to economic growth, it often overlooks environmental factors, viewing climate adaptation primarily as a regulatory compliance issue rather than an area for proactive investment. The sector's response to climate regulations has been noted as inconsistent, with concerns about non-compliance and a lack of alignment with climate goals. Additionally, the private sector's access to climate awareness initiatives and technical support is limited, hindering its potential role in sustainable practices.

Donors are critical actors within the network, particularly in their role as financial and technical supporters for large-scale climate adaptation projects. International donors and organizations such as IFAD, World Bank, and USAID provide essential resources that facilitate the implementation of infrastructure projects and climate resilience initiatives. However, while donor support is acknowledged as "crucial for large-scale initiatives," it is also noted that donors have "diversified interests," which may lead to a lack of cohesive strategy among them, affecting the continuity and alignment of climate adaptation initiatives.

The low participation of communities presents a significant challenge within the climate adaptation network. At the grassroots level, farmers and local communities are essential to implementing climate-smart practices

and sustaining adaptation measures. However, these groups often encounter barriers in aligning their agricultural methods with climate-friendly practices. Farmers, for instance, express concerns that "if climate-friendly measures are followed (optimized use of chemicals, etc.), the yield may fall short of the demand." Such concerns, coupled with resistance from grassroots traders who view climate actions as disruptive to their business models, illustrate the need for a mindset shift. There is a critical role here for media to increase public awareness and support behavior change, especially by conveying the benefits of sustainable practices and addressing resistance.

Collaboration and coordination across various sectors, including government, private sector, donors, and communities, is an ongoing challenge. Although climate action is recognized as a shared responsibility, collaboration remains concentrated within government and donor circles, with limited integration of other critical actors. Stakeholders acknowledge that "everyone agrees on the subject of climate action, but in practice some are found lacking." Ensuring the active involvement of diverse stakeholders—across sectors and from local to national levels—is necessary to foster an inclusive and comprehensive approach to climate adaptation. The observed network reveals both the opportunities and limitations in current climate governance, underscoring the need for enhanced cross-sectoral collaboration, accountability, and effective stakeholder engagement to address the multifaceted challenges of climate change in Bangladesh.

ANNEX ACTOR LIST

Govt. (and institutions)

MoA & Agencies	Ministry of Agriculture & Agencies
BB	Bangladesh bank
Mo Defense & Agencies	Ministry of Defense & Agencies
Dept. of Inspection for Fact. & Fish	Department of Inspection for Factory & Fish
Mo Energy & Agencies	Ministry of Energy & Agencies
Mo Finance & Institutes	Ministry of Finance & Institutes
Industrial Org.	Industrial Organization
Mo Commerce	Ministry of Commerce
MoDR	Ministry of Disaster Management and Relief
MoE	Ministry of Education
MoEFCC	Ministry of Environment, Forest and Climate Change
MoFL & Agencies	Ministry of Fisheries and Livestock
Mo Food, BFSA	Ministry of Food, Bangladesh Food Safety Authority
Mo Industry, BSTI	Ministry of Industry, Bangladesh Standards Testing Institute
MoLE	Ministry of Labour & Employment

Mo Land	Ministry of Land
MoLGRD & Agencies	Ministry of Local Government, Rural Development and Co-operatives
Mo Science & Technology & Agencies	Ministry of Science & Technology & Agencies
Mo Transport	Ministry of Transport
Mo Water Resources & Agencies	Ministry of Water Resources & Agencies
MoWCA	Ministry of Women and Children Affairs
Mo Planning & Agencies	Ministry of Planning & Agencies

Donors, Dev. Partners, Civil Society

ACIAR	Australian Centre for International Agricultural Research
ADB	Asian Development Bank
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BMGF	Bill & Melinda Gates Foundation
CGIAR Centres	Consortium of International Agricultural Research Centers
DANIDA	Danish International Development Agency
FAO	Food and Agriculture Organization
FCDO	Foreign, Commonwealth & Development Office

GAIN	Global Alliance for Improved Nutrition
GEF, GCF	Global Environment Facility, Green Climate Fund
GIZ	German Agency for International Cooperation
IFAD	International Fund for Agricultural Development
KGF	Krishi Gobeshona Foundation
NGO-s	Non-Government Organizations
SAARC	South Asian Association for Regional Cooperation
SIDA	Swedish International Development Cooperation Agency
UN Organizations	United Nations organizations
UNIDO	United Nations Industrial Development Organization
USAID, USDA	United States Agency for International Development, United States Department of Agriculture
WFP	World Food Program

Research Organizations, Educational institutes

ICCCAD	International Centre for Climate Change & Development
ICDDR.B	International Centre for Diarrhoeal Disease Research, Bangladesh
IWM, CEGIS, BCAS	Integrated Watershed Management, Center for Environmental and Geographic Information Services, Bangladesh Center for Advance Studies

WHO	World Health Organization
World Fish & Agencies	World Fish & Agencies

Pvt. Sector

ACI Ltd.	Advanced Chemical Industries limited
Agro Foods	Agricultural Foods
BAYER	BAYER
BRAC	Bangladesh Rehabilitation Assistance Committee
CP	
Farmers Org	Farmers Organization
FBCCI, MCCI	Federation of Bangladesh Chambers of Commerce and Industry, Metropolitan Chamber of Commerce & Industry
IDCOL	Infrastructure Development Company
Lal Teer Seed Ltd	Lal Teer Seed Limited
NAAFCO Group	NAAFCO Group
TCB	Trading Corporation of Bangladesh



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ABOUT TAFSSA

TAFSSA (Transforming Agrifood Systems in South Asia) is a CGIAR Regional Integrated Initiative that supports actions improving equitable access to sustainable healthy diets, that boosts farmers' livelihoods and resilience, and that conserves land, air, and water resources in a climate crisis.

ABOUT CGIAR

CGIAR is a global research partnership for a food secure future. Visit <https://www.cgiar.org/research/cgiar-portfolio> to learn more about the initiatives in the CGIAR research portfolio

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