



USAID
FROM THE AMERICAN PEOPLE

Cereal Systems Initiative for South Asia Mechanization and Irrigation (CSISA-MI)



 **CIMMYT**_{MR}
International Maize and Wheat Improvement Center

iDE

Lack of access to affordable and reliable irrigation significantly cripples crop yields and livelihoods for over half of the farmers in southern Bangladesh—a problem that is particularly acute during the dry season. Additionally, labor shortages and the high cost of labor and fuel, along with an underdeveloped agricultural machinery market system, constrain farmer productivity and limit profitability for smallholders. Within this context, commercial agricultural machinery services have significant potential to increase farmer productivity and farm household income.



Local service providers extend mechanization services throughout the Feed the Future zone.

PROGRAM OVERVIEW

CSISA-MI is a five-year, US\$15.75 million program funded by USAID under its Feed the Future initiative to unlock potential agriculture productivity in southern Bangladesh through increased adoption of improved irrigation and agriculture mechanization technologies and practices, delivered by a network of local service providers (LSPs). CSISA-MI takes a unique, dynamic approach by focusing on commercial pathways to achieve sustainable and scalable results with private sector actors driving change in collaboration with the Government of Bangladesh. The International Maize and Wheat Improvement Center (CIMMYT) leads the project in partnership with International Development Enterprises-Bangladesh (iDE).

CSISA-MI was designed as a synergistic addition to the ongoing USAID-funded Cereal Systems Initiative for South Asia (CSISA) program. While CSISA focuses on adaptive technology testing, deploying new crop varieties, training farmers, and facilitating output markets, CSISA-MI goes beyond this to focus on upstream market interventions to ensure that technologies needed for agricultural intensification are sustainably available through local markets. CSISA-MI takes a collaborative learning and adaptive management approach in order to stay nimble and effective as the market for agricultural machinery evolves. Strategic initiatives are made in close collaboration with USAID Bangladesh.



PROGRAM ACTIVITIES

Promote innovative technologies. CSISA-MI promotes three core technologies to drive more precise and resource-conserving agriculture practices: axial flow pump, power tiller operated seeder, and reaper. These machines boost yields by maximizing the productive use of soil moisture, fertilizer, and seed, while saving farmers' time, labor, and money. Promotional activities include demonstrations, farmer field days, cost-shared marketing with private companies, development of public sector “champions,” and various events to increase rural demand of technologies.



Develop and strengthen local service provider networks. CSISA-MI trains local service providers—local entrepreneurs who purchase the equipment and provide affordable services to farmers—to use and maintain agricultural machinery. The project also delivers business and financial management training and helps link these LSPs to new customers, local mechanics, sources of spare parts, and financial institutions.

Leverage private sector investments to commercialize and scale agricultural technologies. Through effective partnerships with private sector partners, CSISA-MI catalyzes commercial import, manufacturing, marketing,



sales, and after sales services of target machinery. This is a profit-driven model where the companies, dealers, LSPs, and farmers all experience increased revenues—creating a value chain for the target machine and machinery services that will sustain beyond the life of the project. CSISA-MI builds the capacity of the private sector, supports their risk mitigation, partners in research and development, cost-shares new investments, and increases the flow of market information. The project also supports the wider market system—including market actors such as mechanics, workshops, and spare parts manufacturers and retailers—and works with financial institutions and the public sector to address constraints within the enabling environment.



Reaping services address labor shortages and the risks of sudden weather events, as well as aid farmers to quickly make farms ready for next season's planting.



Research and public sector engagement. Science-based interventions are essential to CSISA-MI's work. CIMMYT scientists lead applied research to develop appropriate irrigation and nitrogen regimen for maize grown in the region. Further research uses remote sensing and GIS to identify the appropriate environment and soils for technologies. For example, identify areas where axial flow pumps can be used to bring dry season fallows and less productive land into intensified cropping.

CSISA-MI has also coordinated efforts with the extension staff of the Department of Agriculture Extension throughout the FtF zone on the use of surface water irrigation and advanced agricultural machines. CSISA-MI has engaged the Bangladesh Agricultural Development Corporation in excavating a canal system and continues to collaborate with Bangladesh Agricultural Research Institute to test and refine two-wheel tractor based agricultural machinery and irrigation pumps.

THREE-YEAR RESULTS

- More than 124,000 farmers have benefited from mechanization and agriculture services
- Nearly 90,000 hectares of land tended with improved technologies or management practices.
- More than US\$ 2.2 million of new private sector investment leveraged to introduce and expand technology and agriculture service used by farmers. And roughly 1,600 target machines sold within the project area.
- Nearly 10,000 farmers and other target audiences in Government, private sector, and civil society exposed to and better informed about improved technology and management practices.
- 4,900 local service providers trained on machine operation and maintenance and/or business planning.

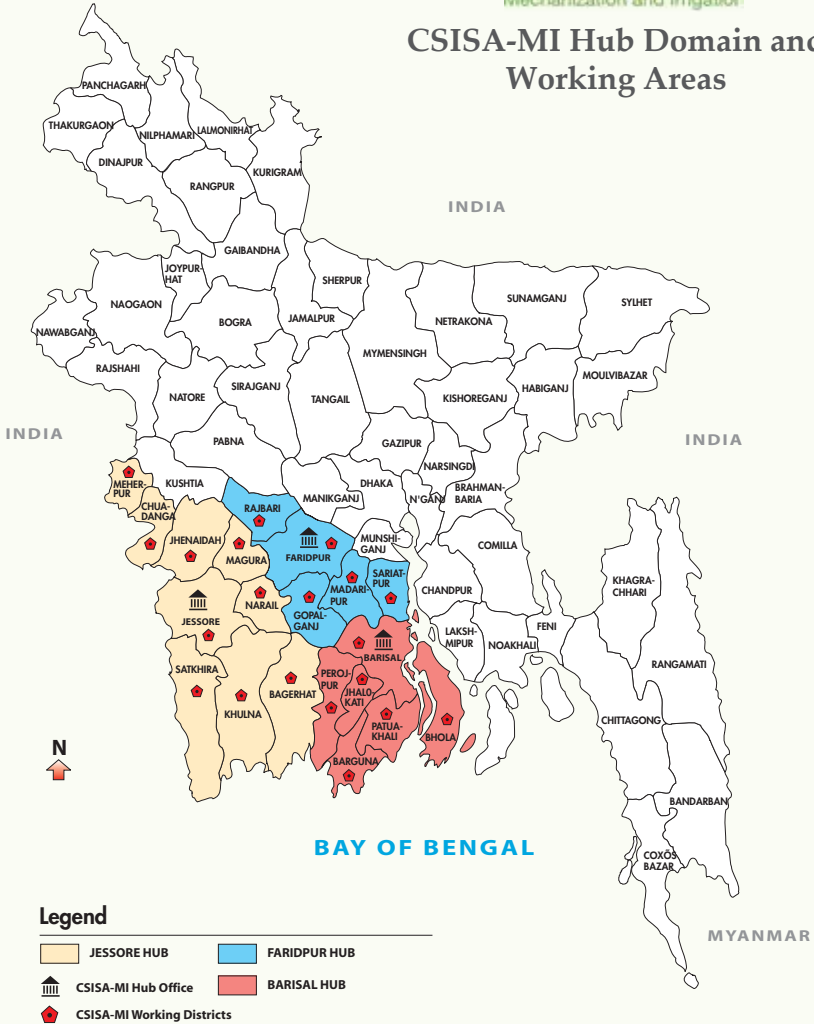


Working Areas



Mechanization and Irrigation

CSISA-MI Hub Domain and Working Areas



SNAPSHOT

Life of Project:

July 2013 – September 2018

Goal:

Sustainably intensify production of cereal and other crops and generate incomes for small-holder farmers through leveraged private sector investments in the agriculture machinery market and support from the Government of Bangladesh.

Implementing Partners:

The International Maize and Wheat Improvement Center (CIMMYT) leads in partnership with International Development Enterprises (iDE).

Geographic Focus:

Feed the Future zone in southern Bangladesh.

www.csisa.org

IMPLEMENTING PARTNERS

CIMMYT (www.cimmyt.org) - the International Maize and Wheat Improvement Center is the global leader in publicly-funded maize and wheat research and related farming systems. Headquartered near Mexico City, CIMMYT works with hundreds of partners throughout the developing world to sustainably increase the productivity of maize and wheat cropping systems, thus improving global food security and reducing poverty. CIMMYT is a member of the CGIAR Consortium and leads the CGIAR Research Programs on MAIZE and WHEAT. The Center receives support from national governments, foundations, development banks and other public and private agencies.

iDE (www.ideorg.org) is a non-profit, non-governmental organization that employs business principles, appropriate technologies, and agricultural science to facilitate market systems in which the rural poor can participate effectively. iDE employs a Markets for the Poor (M4P) methodology and works to strengthen the position and options of the rural poor within the markets that they engage in.