

POLICY BRIEF

Issue No.1, July 2020



Promoting an Enabling Environment for the
Private Sector for Sustainable Agricultural Mechanization





Promoting an Enabling
Environment for the Private
Sector for Sustainable
Agricultural Mechanization

Introduction

Countries in the Asia-Pacific region face significant challenges to achieving the 2030 Agenda for Sustainable Development. In the context of food security and rural development, these challenges include persistent poverty, reduced availability of agricultural labour, demographic changes including an ageing agricultural workforce, inefficient agricultural value chains, degradation of natural resources and the environment, and impacts of climate change. Much of the burden of addressing these challenges falls on the agricultural sector. In this context, sustainable agricultural mechanization can play a key role in alleviating many of the constraints. For instance, it can help address shortage of labour, ease drudgery, enhance productivity and the timeliness of agricultural activities, promote efficiency in resource use, enable better market access and support measures to mitigate climate related hazards.¹

At the same time, the attainment of the Sustainable Development Goals (SDGs) requires affirmative actions from a wide range of actors whose collective efforts can outweigh what they would deliver individually. The private sector is a critical agent of change and an important partner for the implementation of the SDGs. In relation to sustainable agricultural mechanization, business-led initiatives in areas such as research and development, knowledge-sharing and infrastructure investment have deep potential to stimulate development, enhance productivity gains, increase efficiency in the use of natural resources and inputs, create better quality jobs, deepen state capacities, and accelerate technological advances. A conducive and enabling environment is important to support such a role for the private sector and help it to contribute towards SDG target 2.3 (doubling the agricultural productivity and incomes of smallholders) and target 2.4 (ensuring sustainable food production systems) under SDG 2 (Zero Hunger) as well as target 1.1 (eradicating extreme poverty) under SDG 1 (No Poverty) and SDG 17 (enabling global partnership for sustainable development), among other targets.

For the purpose of this policy brief, the 'private sector' in relation to agricultural mechanization is understood to comprise of four groups of economic actors: (1) farmers, (2) retailers and wholesalers, (3) manufacturers, and (4) importers. As this brief illustrates, the creation of an enabling environment for the private sector for sustainable agricultural mechanization requires related government entities to implement well-delineated policies, provide effectual incentives, and establish accessible communication channels. It necessitates the private sector to take the initiative to adopt sustainable business practices, respect established standards, and channel their needs and concerns to the government and other stakeholders. It also requires relevant research and academic institutions to innovate and develop sustainable and cost-effective agricultural machinery and practices to achieve productivity

¹ FAO (2020), "Sustainable Agricultural Mechanization", *FAO Website*, <<http://www.fao.org/sustainable-agricultural-mechanization/overview/what-is-sustainable-mechanization/en/>>.

gains in collaboration with the private sector, civil society to convey the voices of farming communities to other public and private stakeholders, and international development partners to create platforms on which all stakeholders could understand each other's concerns and explore practical solutions on a regular basis. The need for such a platform is particularly real as the intensity and scope of the challenges faced by the agricultural sector are constantly growing. Only through all-embracing solutions and models can stakeholders work together as partners to address these challenges effectively. Beyond collective actions, effective communication and dialogue among both the public and private sector stakeholders are also crucial. Such exchanges can especially contribute towards the creation of employment opportunities, enhancement of research and development, and promotion of sustainable agricultural development through bringing in innovations and good practices so as to better serve the needs of farmers.

In view of the importance of the private sector for promoting sustainable agricultural mechanization and the need to leverage synergies with other stakeholders, this policy brief aims to (1) shed light on the challenges in strengthening the role of the private sector in sustainable agricultural mechanization in the Asia-Pacific region and (2) contribute practical insights for the creation of an enabling environment for a profitable and responsible private sector to promote sustainable agricultural mechanization. To achieve these objectives, this policy brief is divided into two parts. The first part will summarize and analyse the main challenges identified by various stakeholders in the agricultural machinery sub-sector in the region. Based on this context, the second part will explore a range of policy recommendations through which various stakeholders, including government entities, research and academic institutions, the private sector, civil society and international development partners, can contribute to putting in place an enabling environment for the private sector for strengthening sustainable agricultural mechanization in the region.

I. Challenges Facing the Private Sector in Sustainable Agricultural Mechanization in the Asia-Pacific Region

The agricultural machinery sub-sector in Asia and the Pacific is facing a number of challenges in relation to the creation of an enabling environment for the private sector. Among them, five key challenges are: (1) inadequate policy and regulatory support; (2) limited government engagement with the private sector; (3) lack of training opportunities; (4) inadequate infrastructure; and (5) weaknesses in access to finance.

(1) Inadequate Policy and Regulatory Support

Inadequate policies and regulations with regard to agriculture and agricultural machinery is a common challenge faced by many countries in the Asia-Pacific region. In particular, countries that rely heavily on agricultural machinery imports, particularly some of the least developed countries (LDCs), still lack well-researched and well-formulated government regulations to oversee agricultural production and mechanization development. Even if these countries might have some foundational policies and regulations for the use of agricultural machinery, many of their existing regulations are out-of-date and may only cover the newly-introduced machine types. For instance, these circumstances often lead to unregulated emission of harmful pollutants by machinery and other negative impacts on the natural environment in the country. There hence exists an urgent need for the regulation of agricultural mechanization technologies and equipment, practices and strategies in order to promote sustainable agricultural mechanization in the region.

The issue of inadequate policy and regulatory support in the region also presents challenges to agricultural machinery exporting countries. For example, many manufacturers/exporters from the exporting countries have already realized the key importance of product quality in machinery export in terms of durability and user-friendliness, of which importers in the region are highly sensitive. However, thus far there still exist limited regular channels for exporters to stay updated with the technical standards required by machinery users from different countries. Often, exporters need to go to lengths to research and verify the specific needs of a particular country. The development of mechanisms that oversee the publications and updates of government regulations and/or recommendations for agricultural machineries in respective countries would, therefore, substantially facilitate manufacturing and exports.

(2) Limited Government Engagement with the Private Sector

Recent years have seen a wider recognition of the importance of public-private partnerships in the promotion of sustainable agricultural mechanization across the region. For example, in Thailand, recent years have seen an increasing number of collaborations between the public and private sector to promote sustainable agricultural mechanization in the country. Examples include the Agri Forum & Kubota Showcase, Agritechnica Asia, Sima ASEAN, and the Agricultural Machinery Fair, which are ongoing public-private efforts to enrich business connections and technical exchanges in the agricultural machinery sub-sector within and beyond Thailand.

However, the promotion of public-private partnerships is still stagnant in many other countries due to the absence of suitable public-private partnership legal-institutional frameworks. In some markets, Public-Private Partnership is still a relatively novel business model, and entities from both the public and private sector are still uncertain and, at times, over-cautious about the risks and legal procedures to administer this type of business model.

(3) Lack of Training Opportunities

Lack of training opportunities is a challenge mostly in agricultural machinery-importing countries. It is observed such a problem is relatively less serious in countries which export and/or manufacture agricultural machinery themselves. For example, in some machinery-importing LDCs in the region, there still exists relatively weak coordination between education institutes and the private sector. With limited exposure to relevant training opportunities, farmers may be hesitant to make use of newly available technologies because they lack the technical know-how to operate them safely and efficiently. Similarly, the education of farmers is at times not adequate or effective enough to meet the growing demand for more sustainable and cost-effective agricultural machinery. It is apparent from these cases that there exists a complementary relationship between adoption of mechanization and machinery training in the region. However the market appears to be often more capable of matching the demand for machinery, but not the demand for related training in the machinery-importing countries.

(4) Inadequate Infrastructure

Inadequate infrastructure is a challenge faced by many countries in the Asia-Pacific region. This challenge is particularly important as basic infrastructure like roads, railways, and communication networks, together with infrastructure required specifically for agricultural purposes, such as irrigation systems, rural electrification, and watershed development, is crucial to the efficiency and stability of the whole agricultural value chain. As of now, many developing countries in the region still have a strong need for more advanced agricultural infrastructure, including for more effective and sustainable water management systems.² Beyond agricultural infrastructure which directly affects agricultural production, further advancement of basic infrastructure like roads and railways, particularly in marginal and remote areas, is also required to facilitate the timely supply of agricultural inputs from manufacturers/distributors to farmers as well as the marketing of agricultural produce to consumers. Moreover, as climate change continues to present mounting challenges to agricultural production worldwide, the advancement of national climate observation networks capable of providing accurate and timely advance warnings and risk assessments is equally important. Collectively, such measures can serve as key elements in an overall strategy to strengthen agricultural value chains.

(5) Weaknesses in Access to Finance

Similar to the challenge of inadequate infrastructure, weaknesses in access to finance are an existing challenge in both machinery exporting and importing countries. Among the financial constraints faced by farmers in the region is restricted access to credit and, therefore, limited sources of funds, including self-financing, for the purchase of appropriate farm equipment. These constraints are particularly critical as a large proportion of farmers in Asia and the Pacific are smallholders and includes those who have to rent land to grow. They have very limited

² FAO, Asia and the Pacific Regional Overview of Food Security and Nutrition: Accelerating Progress Towards the SDGs (2018), < <http://www.fao.org/3/CA0950EN/ca0950en.pdf>>.

funds to purchase or scale up the equipment and technologies they use for farming. In some specific countries, the problem of inadequate financial support is further aggravated by high import taxes and transportation fees for machinery and equipment.

For the region as a whole, climate change also lends greater urgency to the need to enhance financial support for the private sector in agriculture including for sustainable agricultural mechanization. As extreme climate events continue to impact farm livelihoods, farmers in the region are facing increasing financial stress. It is therefore crucial for all stakeholders including governments to consider substantive measures to alleviate these financial constraints as part of overall efforts to promote an enabling environment for the private sector for sustainable agricultural mechanization.

II. Policy Recommendations

Based on the above background, the following section explores various policy recommendations with which various stakeholders, including government entities, the private sector, research and academic institutions, and international development partners and civil society, could contribute to the creation of an enabling environment for the private sector for promoting and strengthening sustainable agricultural mechanization in the region.

Government Entities

Overall, concerned government entities should consolidate relevant policies and regulations, strengthen their engagement with the private sector, facilitate the provision of training opportunities, strengthen related infrastructure development, and deepen their financial support for the private sector. Some specific recommendations include:

- Develop national strategies/policies and regulations to promote sustainable agricultural mechanization, including preferential tax policies for suitable and sustainable technologies and equipment, and conduct regular policy evaluation and adjustments to address new challenges.
- Establish/strengthen national agricultural machinery testing systems and facilities to ensure safe and efficient operation of the machinery and equipment.
- Develop and improve policy information sharing mechanisms and channels that are accessible by overseas users. These platforms should cover a diverse range of aspects such as available strategies, policies, laws and regulations, and national standards.
- Maintain regular and responsive communication channels with other stakeholders via forums, annual meetings, and online platforms, through which the non-government stakeholders can channel their concerns, opinions and suggestions to the government and obtain appropriate responses in a timely manner.

- Explore possibilities of public-private partnership projects, such as agricultural machinery exhibitions, industrial forums, and establishment of agricultural machinery training centres.
- Initiate the provision of regular and targeted training for manufacturers, distributors, and importers, particularly those from small and medium enterprises, as well as for smallholders who are vulnerable to natural hazards and market risks. This can be undertaken in collaboration with all interested entities, including research and academic institutions, non-governmental organizations as well as regional and international development agencies.
- Initiate, accelerate, and consolidate rural infrastructure development, including roads and irrigation systems to facilitate the development of an efficient and stable agricultural value chain.
- Explore possibilities of public-private partnership as a method to speed up infrastructure construction.
- Widen the variety of financing channels for smallholder farmers, for example, through the provision of low-cost government loans, promotion of credit firms that cater to smallholders, and crowdfunding for the purchases of agricultural machinery and equipment in rural areas, to enhance the private sector's access to credit and funding.
- Negotiate fair trading agreements with main trade partner countries and minimize/regulate import taxes on imported agricultural machinery to encourage prompt and easy adoption of sustainable agricultural mechanization technologies (especially for countries that rely heavily on imported agricultural machinery).

Private Sector

Recommendations for the private sector in the agricultural mechanization sub-sector, comprising of farmers, retailers and wholesalers, manufacturers, and importers, are as below:

- Leverage opportunities to provide advice and take part in policy formulation, and actively communicate concerns and opinions to the government through available channels. Also be open to cooperating with other stakeholders within and beyond the agricultural mechanization sub-sector.
- Undertake proactive approach towards adopting and adapting new sustainable agricultural mechanization technologies and models while availing of relevant training opportunities, especially those that aim for greater adoption of new technologies and better agricultural machinery business management skills.
- For manufacturers, importers and distributors:
 - Promote active, two-way communication to track and assess market needs and concerns.
 - Promote development of after-sales maintenance and repair services, both in manufacturing and importing countries, with special consideration for needs of smallholders.

- Keep track of relevant developments in the region including emerging market needs, technological innovations and changing government regulations for agricultural machinery in different countries.
- Direct adequate resources to R&D and adjust manufacturing models according to the changing market needs and updated standards.

Academic and Research Institutions

Academic and research institutions act as sources of innovation to scale up the adoption of sustainable agricultural technologies practices. Recommendations for them include:

- Promote research into technological innovations that can scale up sustainable agricultural mechanization through appropriate and inclusive machinery, practices and models. Also encourage joint research with manufacturers so as to enhance the commercialization and popularization of the innovations.
- Support development of mechanization solutions and their scaling up through the private sector which can promote mitigation and adaptation measures to combat climate change in the agricultural sector.
- Provide in-depth analyses on the changing needs and trends for the agricultural mechanization sub-sector which can inform policy formulation and execution by government, investment planning by the private sector, and capacity building and other initiatives through civil society and development agencies. Also complement the analyses through need-based training for other stakeholders.

Civil Society

Non-governmental organizations and civil society can serve as an important medium to link the end beneficiaries with other stakeholders and to advocate for their needs and demands which is critical for facilitating sustainable agricultural mechanization. Some of the recommendations for civil society organizations include:

- Strengthen consultative processes and mechanisms to ensure that local-level needs and constraints for adoption of sustainable mechanization technologies are conveyed to government, private enterprises and other stakeholders. At the same time, the views and perspectives of the other stakeholders are also relayed to the end beneficiaries.
- Undertake stronger advocacy for the views and concerns of vulnerable communities so that they can be integrated into policy formulation and private sector planning. For instance, adequate visibility to the demands of smallholder farmers and the challenges they face in access to and use of agricultural machinery should be provided which can, among other outcomes, enable private enterprises design more suitable equipment and related financing mechanisms.
- Intensify efforts to enhance awareness and build capacities of end beneficiaries and key change agents in order to adopt sustainable agricultural mechanization and related good models and practices.

International Development Partners

International organizations and development partners as well as civil society should continue to organize policy dialogues and create platforms through which stakeholders from various countries can exchange key information and insights on the sustainable agricultural mechanization sub-sector with their counterparts in other countries on a regular basis. Specific recommendations include:

- Act as 'bridges' to expand and deepen regional cooperation through exchange of knowledge, good practices and experience.
- Develop, maintain, and refine knowledge-sharing platforms which target diverse stakeholders in the region.
- Provide capacity building opportunities in close collaboration with other stakeholders, including training of trainers, so that relevant stakeholders in the region can have a better grasp of international standards and the latest innovations and good practices.
- Organize policy dialogue amongst different countries and different stakeholders on a regular basis, and produce timely reports and publications for enabling knowledge generation and exchange.

Conclusion

In conclusion, inadequate policy and regulatory support, limited government engagement with the private sector, lack of training opportunities, inadequate infrastructure and weaknesses in access to finance are among the most pressing challenges in the creation of an improved enabling environment for the private sector to promote sustainable agricultural mechanization. As the demands on the agricultural sector grow, these challenges too have been intensifying in complexity and scope in recent years.

To address the above-mentioned challenges, the private sector has a key role in developing and promoting sustainable mechanization solutions based on a demand-driven model. It is instrumental in not only catalyzing innovation and developing more suitable and efficient solutions but also in scaling up their use by different segments of farmers to an impactful level through marketing and after-sales support. In this way, the private sector's contribution is vital for alleviating poverty, ensuring food security, and promoting sustainable and inclusive agricultural and rural development as envisaged under the 2030 Agenda for Sustainable Development. However, other stakeholders including government, research and academic institutions, civil society and international development partners must contribute to creating and nurturing an enabling environment that can help the private sector achieve its full potential. For this purpose, dialogue and effective collaboration based on each stakeholder's strengths and comparative advantages can contribute substantially towards an efficient, profitable and responsible private sector that fulfils its role to the fullest extent in enabling inclusive and sustainable agricultural mechanization in the Asia-Pacific region.

About This Policy Brief

This policy brief is an outcome of the discussions and contributions received at the 'Sixth Regional Forum on Sustainable Agricultural Mechanization in Asia and the Pacific' held in Wuhan, China, during 25-27 October 2018. Focusing on the theme of 'Enabling Environment for the Private Sector', the Sixth Regional Forum was organized by CSAM in collaboration with China Agricultural Machinery Distribution Association (CAMDA), China Agricultural Mechanization Association (CAMA), and China Association of Agricultural Machinery Manufacturers (CAAMM). It was attended by 150 participants from 17 countries including policymakers, academics, researchers, extension workers, and representatives from the private sector, industry associations, as well as relevant international and regional organizations.

The Regional Forum is an annual strategic initiative of CSAM that aims to promote high-level policy dialogue and regional cooperation on shared or emerging issues faced by member countries of the region. Since 2013, five Regional Forums have been successfully organized. Throughout these years, this initiative has facilitated constructive discussions on topics such as Public-Private Partnership, Custom Hiring and Machinery Rental Practices, Human Resource Development, Climate-Smart Mechanization, and Sustainable Agricultural Mechanization Strategy. Apart from providing a platform for assessment of regional priorities, exchange of experiences amongst countries and stakeholders, and exploring potential for synergistic action, the Regional Forum is an event which enables the conception and incubation of new programmes and activities for CSAM in fulfilment of its mandate to promote sustainable agricultural mechanization in the region.