Trade and Investment Policies on Mechanization of Agriculture

Case Studies of Selected Member Countries of the Regional Council of Agricultural Machinery Associations in Asia and Pacific (ReCAMA)

(Bangladesh, Indonesia, Pakistan, Philippines, and Turkey)
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GENERAL OBJECTIVE OF THE STUDY:

Trade and Investment Policies on Mechanizing Agriculture

To contribute to the pool of knowledge available to countries as well as to other stakeholders of mechanization in Asia and the Pacific for better appreciation of the exchange, trade and investments on agricultural machinery in the Region.
SPECIFIC OBJECTIVES:

1. present the current trends of agricultural development in each country;
2. present the initiatives and developments on sustainably mechanizing the agricultural sector in the country;
3. analyze the enabling environment for Trade and Investments for sustainably mechanizing the agricultural sector; and
4. generate relevant recommendations based on the analysis.
SELECTED COUNTRIES FOR THE STUDY:

Five countries selected:

- Bangladesh
- Indonesia
- Pakistan
- Philippines
- Turkey

The selection was formulated based on the country’s voluntary dedication and consideration of their experiences in agricultural policy making.
Primary and Secondary Data
- collected data to describe different agricultural trends and development in the agricultural sector including agricultural mechanization

National Statistics Office and other Institutions’ Data
- Collected data from institutions’ involved in agricultural mechanization development. Data were integrated, and presented in this report.
Chapter 1 - Introduction, significance and objectives of this study, including a brief introduction of the selected ReCAMA countries which includes the basis of selection, study approach and structure of the report.

Chapter 2 - Description of the enablers of sustainable agricultural mechanization, including the role of the government and private sector in promoting sustainable agricultural mechanization in each selected country and the existing and governing policies on trade and investments on agricultural machinery and mechanization.

Chapter 3 - Country profiles that explores the development trends of the agricultural sector and the sustainable agricultural mechanization initiatives of each of the selected countries, and the enabling environment for trade and investments for sustainably mechanizing the agricultural sector.

Chapter 4 - Discussions on the major findings, conclusions with policy recommendations for countries to adopt.
### Trend in GDP contribution

<table>
<thead>
<tr>
<th>Country</th>
<th>Agriculture Sector</th>
<th>Industry Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Decreasing trend</td>
<td>Increasing trend</td>
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<tr>
<td>Indonesia</td>
<td>Increasing trend</td>
<td>Increasing trend</td>
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<td>Pakistan</td>
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<tr>
<td>Philippines</td>
<td>Decreasing trend</td>
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<tr>
<td>Turkey</td>
<td>Decreasing trend</td>
<td>Increasing trend</td>
</tr>
</tbody>
</table>

Shift from agricultural to industry and services sector
# SUMMARY OF FINDINGS: Agricultural Profile

## Staple food for the population

<table>
<thead>
<tr>
<th>Country</th>
<th>Staple Food</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>Rice, Corn</td>
<td><a href="https://medium.com/remote-sensing-in-agriculture/addressing-sugarcane-planting-failures-67689c0a7f4d">https://medium.com/remote-sensing-in-agriculture/addressing-sugarcane-planting-failures-67689c0a7f4d</a></td>
</tr>
<tr>
<td>Indonesia,</td>
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<tr>
<td>Philippines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey*</td>
<td>Wheat, Barley, Maize</td>
<td><a href="https://www.saltspringsseeds.com/collections/barley-seeds">https://www.saltspringsseeds.com/collections/barley-seeds</a></td>
</tr>
</tbody>
</table>
SUMMARY OF FINDINGS: Agricultural Profile

All five countries:

- export their agricultural products particularly fruits, vegetables and nuts.

- smallholder farmers playing vital role in the production of the major crops. (0.5 ha to less than 5 ha)

- have established value chains for their major crops

- Practice custom hiring services for large machines

- Established Farmers’ Organizations except Bangladesh
# SUMMARY OF FINDINGS: National Policies and Programs

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>Roadmaps on sustainable agricultural mechanization</th>
<th>Laws and policies on agricultural mechanization</th>
<th>Reduced import duties and taxes</th>
<th>Safety nets to ensure quality machines</th>
<th>Establishment of agricultural machinery testing and evaluation centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>✔</td>
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<tr>
<td>Indonesia</td>
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</tr>
<tr>
<td>Country</td>
<td>Research and Development</td>
<td>Status of Mechanization</td>
<td>Import and Export of Medium to Large Machinery</td>
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<tr>
<td>Bangladesh</td>
<td>Increasing R&amp;D Outputs</td>
<td>Man-Animal-Small Machine Systems</td>
<td>Importer</td>
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<tr>
<td>Indonesia</td>
<td>Increasing R&amp;D Outputs</td>
<td>Increasing use of Small to Large Machine Systems</td>
<td>Importer/Exporter</td>
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<tr>
<td>Pakistan</td>
<td>Increasing R&amp;D Outputs</td>
<td>Man-Animal-Small to Large Machine Systems</td>
<td>Importer/Exporter</td>
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<td>Philippines</td>
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<tr>
<td>Turkey</td>
<td>Increasing R&amp;D Outputs</td>
<td>Heavy user of medium to large Machine systems</td>
<td>Importer/Exporter</td>
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Shift from conventional/traditional farming methods TO - use of modernized and innovative machinery and technologies paving the way of increasing the use AMTs and increasing the Trade and investments of Machines in the 5 selected countries
## SUMMARY OF FINDINGS: Trade and Investments

<table>
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</table>
Trade and investment are important drivers of economic growth. To sustain agricultural growth, it is important to strategically allocate investments in areas of development where they are needed.

There is a shift from conventional farming to smart farming for sustainable and quality food production using advanced inputs and technologies, and management systems.

The government provide farmers with knowledge systems and innovations through various policies, infrastructural and financial support systems.

The private sector are encouraged to provide investment and financial support systems through public-private partnerships in the development and advancement of the agriculture sector with trade and investment of agricultural machinery.
CONCLUSIONS:

In general, all the five countries through their government in collaboration with the public and private sector including the manufacturers’ associations have established:

- policies on trade
- infrastructure
- networking
- safety nets

Enabling the investment and trade environment of agricultural machinery to succeed for a more sustainable agri-machinery supply in the machinery value chain.
CONCLUSIONS:

The acceleration and purposive use of agricultural mechanization technologies in the agricultural production systems is for the upliftment of the lives of the farmers through increased productivity and income for prosperity.

While certain policies may differ in each country in terms of socio and geopolitical structures, these should not serve as barriers in knowledge and information exchange among farmers, especially the best practices implemented among geographically similar farming environments.
CONCLUSIONS:

Cooperation among these countries shall lead to better trade and investment options, opening and livening markets and industries with agri-machinery that are built to specifications and international standards and are suited specifically to certain countries in need.

The success of such system shall be the springboard for a richer trade and investment policies that are mutually beneficial between and among countries.
RECOMMENDATIONS:

1. The enacted laws and formulated national policies on agricultural mechanization should be implemented as it is envisioned.
2. There should be a continuous strengthening of support and incentives for the advancement of mechanization.
4. Continued research and development on modern and innovative machinery.
5. Establishment and strengthening of the centers for standards and testing of machinery.
RECOMMENDATIONS:

6. **Prioritization and modernization** of after sales service for machineries.

7. **Promotion** of precision agriculture and smart farming.

8. **Strengthen** capacity building and training facilities for farmers and farmer groups.

9. **Establishment of credit facilities** for farmers and service providers.


11. **Implementation of land consolidation** or clustering for mechanization.
RECOMMENDATIONS:

With all the conditions and enabling environment presented, Trade and Investment in Mechanizing the Agriculture will continue to flourish in these 5 countries under study:

The Government should continue its role in providing directions by formulating policies on agricultural land, judicious use of natural resources such as land and water, labor policy, industrial policy, infrastructure development for agricultural production systems, financial support policy and trade and investment policy, among others.
RECOMMENDATIONS:

R&D institutions supported by the government, and other financial institutions should continue exploring modern and innovative agricultural machinery and technologies with strengthened collaborations with the private sector for higher acceptance and marketability of these products. A regional network for the R&D of agricultural mechanization should be established for easier collaborations, joint undertakings and exchange of information and experiences that would support the Trade and investment industry in the region.
RECOMMENDATIONS:

The local manufacturing industry of each of the countries should be strengthened to be able to contribute to increased demand for mechanization through the improvement of technologies and innovations (e.g., Promotion of smart and precision farming equipment and technologies as the current trend of development) which could propel the livening of the agricultural machinery trade and investment in the Region.
The private sector composed of retailers, wholesalers, importers and investors shall continue assisting the government in ensuring quality AMTs available in the market for the farmers as end-users. Safety nets and Quality assurance of traded AMTs should be strengthened by continuously updating and formulating common international standards acceptable to all the countries (e.g. ReCAMA) involved.
Land consolidation/Contiguous Farming efforts should be enhanced for those countries that initially implemented the concept to allow the use of large machinery that would increase volume of production thereby increasing the yield and income of small farmer holders’ and propel the trading and investment of high capacity and high-power agricultural mechanization technologies.
ACKNOWLEDGEMENT:

Center for Sustainable Agricultural Mechanization (CSAM)

Regional Council of Agricultural Machinery Associations in Asia and The Pacific (ReCAMA)

Selected Member Countries: Bangladesh, Indonesia, Pakistan, Philippines, Turkey
END OF PRESENTATION
THANK YOU FOR LISTENING 😊