



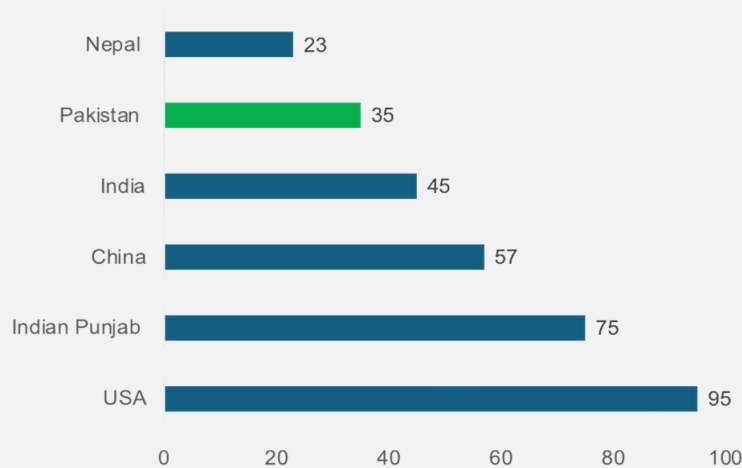
Collaboration with Multilateral Development Banks for Sustainable Agricultural Mechanization in Pakistan

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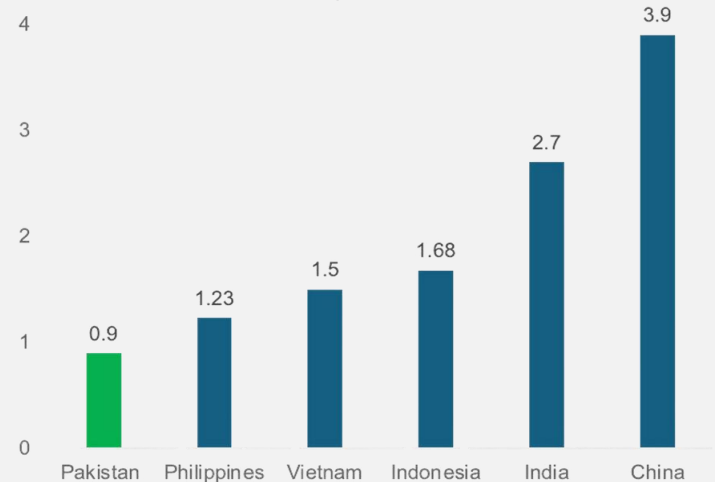
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Agriculture Mechanization in Pakistan

Level of Mechanization (%)



Horsepower / acre



- Currently **25% of sowing** and **40% of harvesting** of cereals is mechanized
- Focus was on tractorization and use of tube-wells for ground water pumping

Minimum requirement of 1.4 hp/acre to enhance productivity

Source: <https://ieomsociety.org/proceedings/2022istanbul/67.pdf>

Nikhade et al. (2020); Farm Sector Policy Department NABARD, India

Agricultural Mechanization Research Institute (AMRI), Multan, Punjab Pakistan

<https://www.trade.gov/country-commercial-guides/pakistan-agricultural-machinery-and-equipment>

<https://www.biotecharticles.com/Agriculture-Article/Status-of-Farm-Mechanization-in-Indian-Agriculture-4468.html>

Reasons for low level of mechanization

Operational

- Fragmented, *small* land holdings
- Inadequate *availability* of mechanical farm power
- Lack of technical *support* & after-sales service



Policy

- Priority for tractors
- Lack of machinery *standards* and *testing* facilities
- Restriction on *imports* to conserve forex reserves



Financial

- High *cost* of equipment / machinery
- Inadequate *credit facilities*; commercial banks hesitant to lend to farmers



Capacity

- Lack of *awareness* and capacity
- Inadequate labour & skills to operate precision farm equipment



The **Govt of Pakistan** is collaborating with the **Asian Development Bank (ADB)** and **Asia Pacific Network for Testing of Agriculture Machinery (ANTAM)** to enhance agriculture mechanization



Asian Development Bank (ADB) Project Support

ADB is preparing a concessional loan project of ~US\$120m to the Government of the Punjab:

1. Increase **access** of small farmers to advanced and sustainable mechanization technologies
 - **Rice:** Nursery raising machines, transplanters, dedicated harvesters
 - **Wheat:** Combined harvesters
 - **Spray:** Drones
 - **Residue collection:** Balers
2. Establish a **circular agriculture model** to reduce carbon emission and enhance resource efficiency
3. Enhance **institutional capacity** to promote resilient and low carbon agriculture



Asian Development Bank Project Support

Project components:

- 3.1** Support the formulate the provincial **mechanization policy** and regulations.
- 3.2** Develop and implement **national standards** and **testing codes** for agricultural machinery by adopting ESCAP-ANTAM standards and testing codes.
- 3.3** Establish equipped agricultural **machinery testing center(s)** to ensure that the machinery meet the set standards.
- 3.4** Establish a **training institute for machine operators** and mechanics and develop course curriculum and training plans.
- 3.5** Developing and integrating **databases** of agricultural machine manufacturers, service providers and farmers for ICT based services and subsidies.

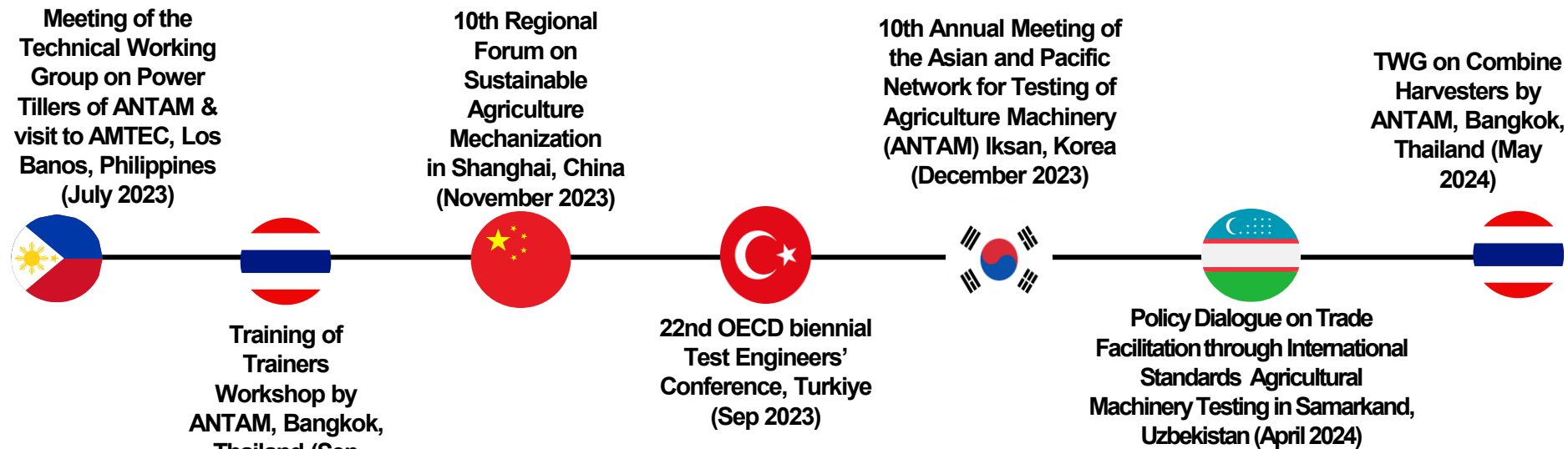


ADB Technical Assistance Support

ADB has supported the Federal and Provincial Governments of Pakistan to **enhance mechanization**:

- Organized a visit of ANTAM-CSAM international experts to Pakistan for data collection and preparation of a needs assessment for establishing a **machinery testing center**
- Coordination with **Pakistan National Accreditation Council, Pakistan Standards & Quality Control Authority, Pakistan Engineering Council** and Provincial Governments to develop machinery standards

Facilitated study visits of Federal & Provincial government machinery experts:



Thank You