

Agricultural Mechanization Datasets in Asia & Pacific:

Status, Issues and Expectations

**10th Session of the TC of CSAM, and
Regional Workshop on Establishing a Regional Database of
Agricultural Mechanization in Asia and the Pacific
Session . IX: Asia Forum**

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Existing (popular) sources of data

UN Web Site | UN Web Site Locator




UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific

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RESEARCH & DATA ESCAP Statistical Database



THE WORLD BANK
IBRD · IDA Working for a World Free of Poverty

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Data

By Country | By Topic | **Indicators** | Data Catalog | Microdata

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Indicators



ADB ASIAN DEVELOPMENT BANK

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FAOSTAT



CountrySTAT
Food and agriculture data network

Publications | **Basic Statistics**



INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
sustainable solutions for ending hunger and poverty

OUR WORK

Datasets

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AMIS Agricultural Market Information System

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AMIS Chair | Secretariat | Market Information Group | Rapid Response Forum | AMIS crops



CGIAR


RESEARCH PROGRAM ON **Climate Change, Agriculture and Food Security**



CCAFS

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Internationally comparable data on agricultural R&D investments and capacity for de



ASTI Agricultural Science & Technology Indicators
Led by IFPRI

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Our activity | Where we work | Outputs and results | *Models, maps, data* | Updates and opinion

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Tools, Maps, Models and Data

... Major International sources

- **FAO**
 - FAOSTAT
 - Country Stat
 - AMIS, [Energy and fertilizer prices etc.](#), [Crop calendars](#)
 - APCAS
- **ESCAP**
 - [Statistical Yearbook of Asia and Pacific \(2013\)](#)
- **World Bank**
 - [World Development Indicators](#), [The World Bank Energy consumption by Agriculture \(%\)](#)
 - [Agriculture & Rural Development Indicators](#), [Ag machinery per 100 km²](#)
- **IEA (2003)**
- **CGIAR / IFPRI**
 - [ASTI](#), [Country factsheets](#), [Agri R&D funding and trends](#)
 - [CCAFS](#), [CC maps](#), [emission data on agriculture environment](#)
 - [IFPRI: Publications](#), [Data](#)
- **ADB**
 - [Key Indicators for Asia and the Pacific \(2014\)](#)
 - [Basic Statistics \(2014\)](#)
- **WFP**
 - [Fact Sheets](#)

...other not-for-profit sources



Home What We Do Where We Work Publications Maps & Data

↑ → Maps & Data → Data Sets

MAPS & DATA

DATA SETS

- (WRI) World Resources Institute

- Earth trends
- Insights
- World Resource Report
- Maps and Data, [Indicators of sustainable agri](#), [GHG emissions](#), [Clean technology data](#)



Statistics for Agriculture > Agricultural machinery

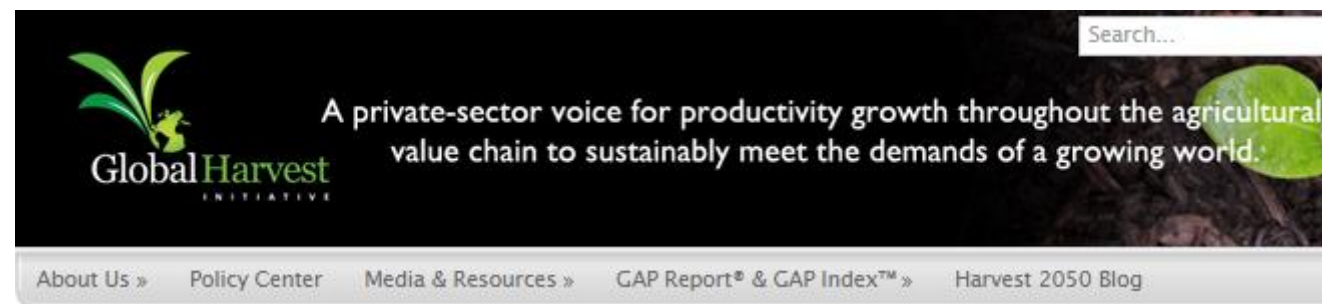
- Worldwatch Institute

- Global Harvest Initiative, [Global Agri Productivity Report 2014](#)

- Nation Master, [Agri machinery](#), [Tractors](#), [Farm productivity](#)

- CIA Factbook

- ...
-





Some perspectives from users...

(these are not complains)

- “we didn’t know they had these data” **Visibility**
- “they don’t want to share them” **Accessibility**
- “these data are messy” **User-friendliness**
- “this is not really what I need” **Relevance**
- “how can I ensure correctness/representativeness of data?” **Comparability**



Are we 'data-constrained' ?

- Timeliness of availability
 - After 5/10 years?
- Data Type
 - Is the current set of data adequate for the purpose?
- Data Quality
 - Machinery population estimated? Projected **linearly**?
- Accuracy / authenticity of data
 - Across various available platforms we get different (sometimes very contrasting) picture



(possible)Benefits of making ourselves 'data-rich'

'Data-Rich':

... appropriate set of indicators; (accurate)Authentic, reliable, representative; Freely accessible in a timely manner; Updated & maintained at appropriate frequency

- Cross-regional, relevant R&D on mechanization
- Promote trade
- Facilitates regional exchange of mechanization technologies
- Promote a healthy competition among manufacturers (favoring the farmers)
- Assist informed-policymakers
- Evidence based decision making



Challenges / Concerns / Issues

- Confidentiality ?
- Specific national trade interests & priorities ?
- Lack of suitable census on agricultural mechanization indicators
- Lack of specific sharing platform ?
 - ... CSAM has a role to timely play!
- Produce a minimum set of core data – commensurate to national priorities
- Standard classification / Uniform definitions of indicators ?
- Data comparability ?
 - Various agencies involved within a country
 - Different frequencies and timing of updating data



(ir)Regularity in FAOSTAT data reporting 2005-2012: Machinery

32% Never reporting *countries that have never reported data*

Turkmenistan, Uzbekistan, China-Taiwan, Democratic People's Rep. of Korea, India, Maldives, Lao PDR, Timor-Leste, Kuwait, Qatar, Saudi Arabia, American Samoa, Micronesia, French Polynesia, Kiribati, Marshall Islands, Nauru, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Vanuatu.

32% Irregularly reporting *countries that reported no more than 2 times out of 4*

Tajikistan, China-Hong Kong, Republic of Korea, Bangladesh, Nepal, Pakistan, Sri Lanka, Brunei Darussalam, Cambodia, Indonesia, Singapore, Viet Nam, Bahrain, Iraq, Lebanon, Oman, United Arab Emirates, Yemen, Cook Islands, Fiji, New Caledonia, Tonga, Tuvalu, USA.

35% Frequently reporting *countries that reported regularly, for at least 3 years out of 4*

Kazakhstan, Kyrgyzstan, China ó mainland, China- Macao, Japan, Mongolia, Afghanistan, Bhutan, Iran, Malaysia, Myanmar, Philippines, Thailand, Armenia, Azerbaijan, Cyprus, Georgia, Israel, Jordan, Occupied Palestinian Territory, Syrian Arab Republic, Turkey, Australia, New Zealand, France, United Kingdom.

Response rates are systematically low in **Machinery** and **Pesticides** data domains

Agricultural Machinery, 2006-2010

Response rate for questionnaires requested (%)

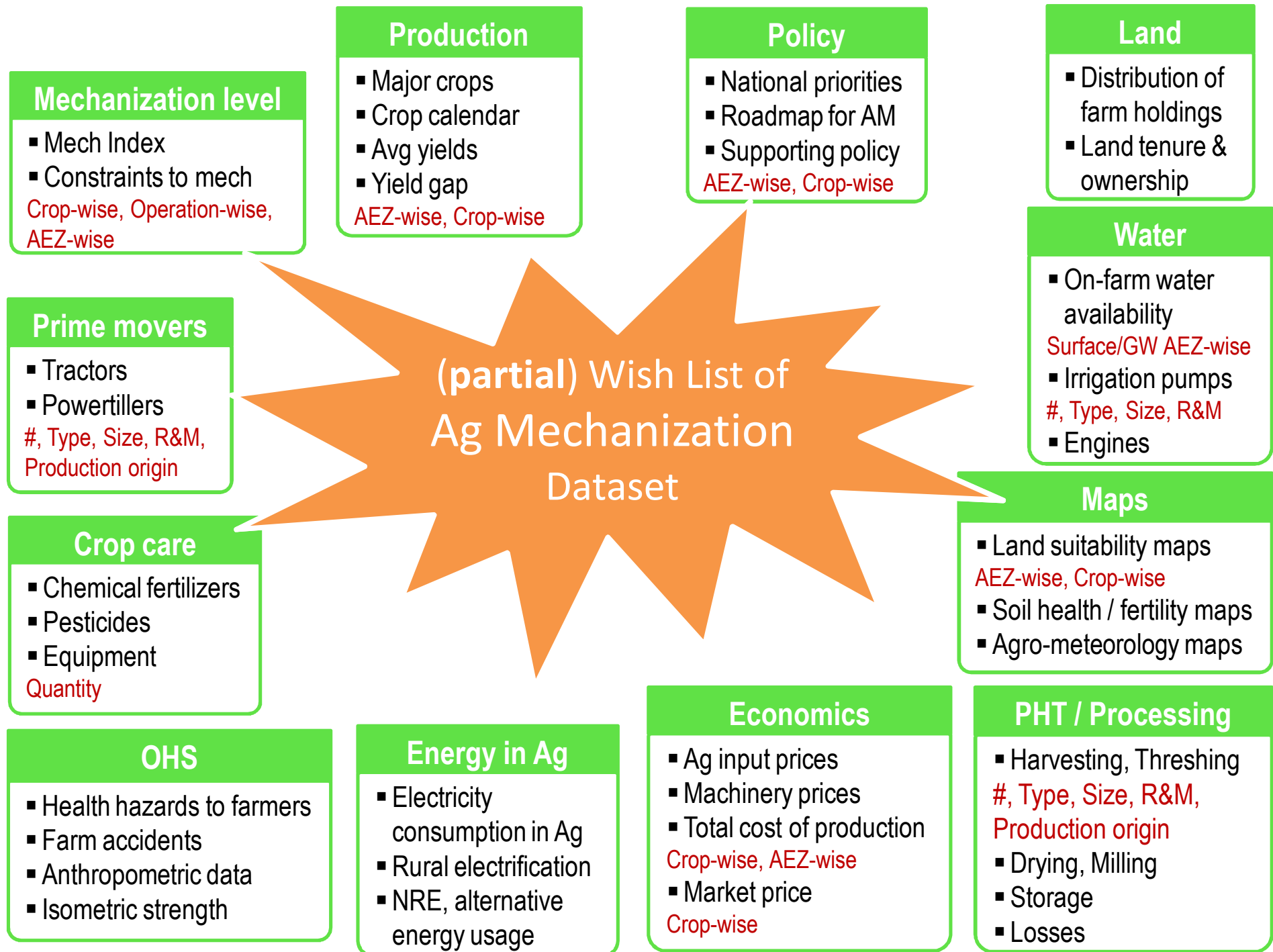
	Countries	2006	2007	2008	2009	2010	2011	2012
Central Asia	5	40%	40%	60%	40%	0%	n.a.	n.a.
Eastern Asia	8	86%	71%	57%	29%	43%	n.a.	n.a.
Southern Asia	9	44%	56%	44%	22%	44%	n.a.	n.a.
South-Eastern Asia	11	27%	55%	27%	45%	9%	n.a.	n.a.
Western Asia	18	44%	56%	67%	56%	39%	n.a.	n.a.
Asia, Total	51	46%	56%	52%	42%	30%	n.a.	n.a.
Oceania	20	15%	20%	25%	15%	10%	n.a.	n.a.
Asia and Pacific, Total	71	37%	46%	44%	34%	24%	n.a.	n.a.
WORLD	227	n.a.	37%	37%	37%	36%	n.a.	n.a.



Regional Network

- Centralizes, harmonizes, standardizes, integrates and validates data on **key Ag Mech indicators**
- Integrates national statistical products into a harmonized template
- Adds value to data (key analyses?)
- Ensures long-term sustainability of system

- Going beyond conventional census-stat? Multi-agency cooperation?
 - Remote sensing images
 - Geoinformatic datasets



Way forward!

Existing databases: National & International repositories

- Draft a wish-list of dataset
- Provide uniform definitions
- Justify its specific use / intended benefit / target beneficiary

TC workshops

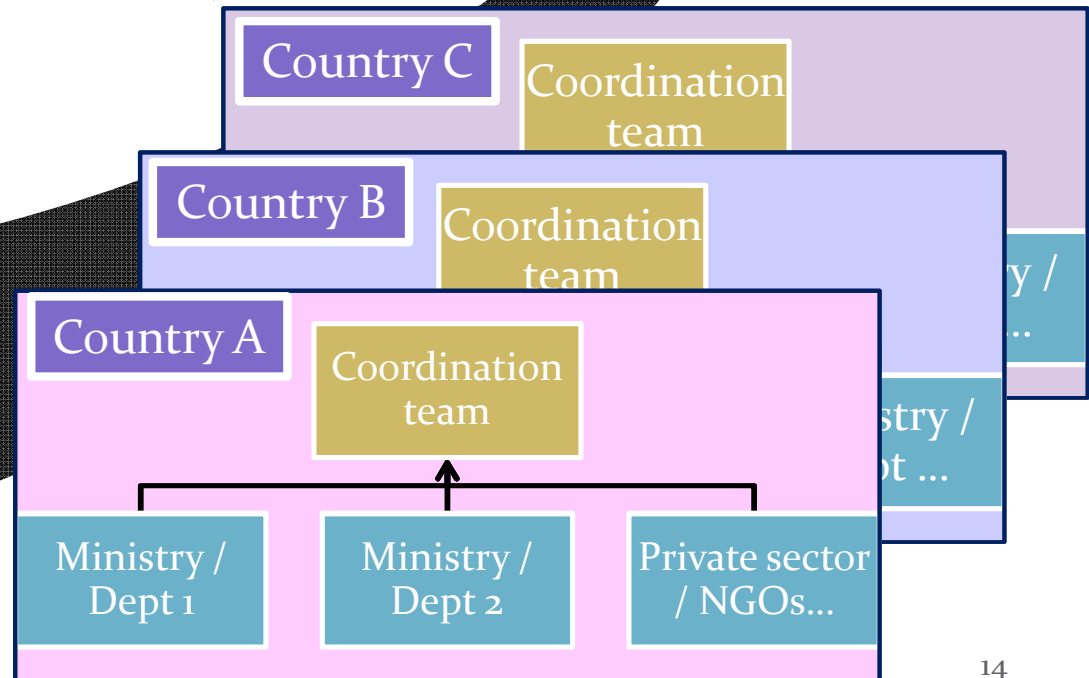
Review, Review, Review, ...

Revise

Adopt

National workshops

- Establish a multi-agency dialogue (through CRs)
- Review which dataset can be contributed by whom
- Summarize relevant existing datasets, its quality, frequency





Thank you

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