Food and Agriculture Organization of the United Nations

Global Conference on

Sustainable Agricultural Mechanization

Efficiency, Inclusiviness and Resilience,

FAO Headquarter, Rome, Italy

27-29 September 2023

On the FAO grounds: Inauguration on September 26, evenining

Joint Agricultural Machinery and Livestock Exhibition

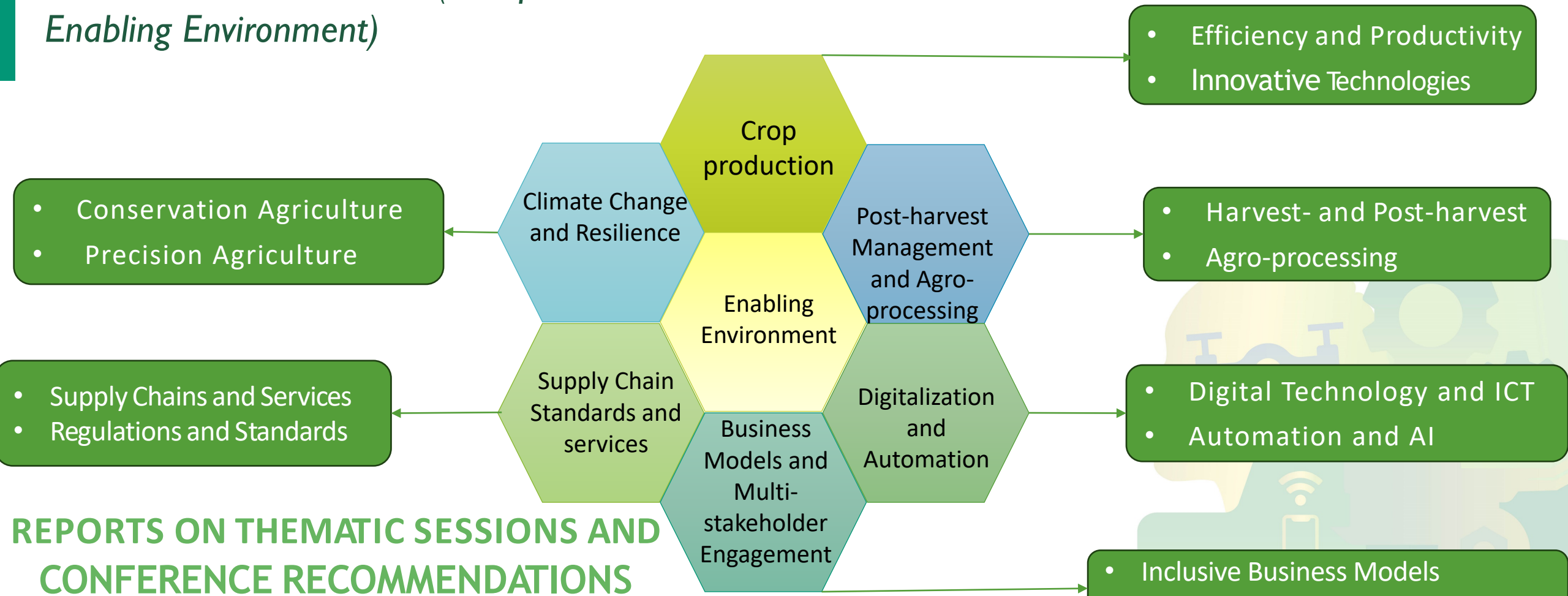
Monday 25 to Friday 29 September 2023

PLENARY SESSION

- *Mechanization for Sustainable Agrifood Systems*
- *Farmer-led Sustainability, Resiliency, and Climate- Smart Agriculture*
- *Climate Change and Mechanization*
- *Farm Power and Energy Source Innovations*
- *Digitalization for Agrifood Systems Transformation*
- *Automation Trends in Agriculture*
- *Policies and Regulations for Sustainable Agricultural Mechanization and Digitalization*

THEMATIC SESSIONS

- *7 thematic sessions and each thematic session is divided into 2 sub-sessions(Except session on Enabling Environment)*



REPORTS ON THEMATIC SESSIONS AND CONFERENCE RECOMMENDATIONS

HIGH-LEVEL SEGMENT AND CLOSING

Moderator: Beth Bechdol, Deputy Director-General, FAO

- **The Honourable Mtolo Phiri**, Minister for Agriculture, **Zambia**
- **H.E. Mohan Priyadarshana De Silva**, Honourable State Minister of Agriculture, Colombo, **Sri Lanka**
- **Mr. Redouane Arrach**, Secretary General of the Department of Agriculture, **Morocco**
- **Ms Renata Bueno Miranda**, Secretary of Innovation, Sustainable Development, Irrigation and Cooperativism, Ministry of Agriculture and Livestock (MAPA), **Brazil**
- **Mr Alpisbay Tolibaev**, Head of Department/ Doctor of Technical Sciences, Ministry of Agriculture of the **Republic of Uzbekistan**
- **Mr Eric Renaud**, Director-General of National Society of Agricultural Mechanization (SoNaMA), **Benin**
- **Discussion**

CLOSING REMARKS **QU Dongyu**, Director-General, FAO

Attendance

- 8500 online registrations with 5615 views
- Over 300 attendees in person.
- 50 FAO Members registered to the event.
- Most registrations came from Africa (39 percent);
- Second largest group was Asia-Pacific (29 percent).
- Attendance per thematic session varied between 2000 and 100 views

Call to action

Mechanization for Crop Production

- Increase farm power access appropriate to the scales and circumstances of local conditions through a variety of business models (including service provider models) and financing schemes, to reduce drudgery and to increase food security without degrading natural resources.
- Invest and promote precision technologies for crop production including protected cultivation especially for smallholder farming systems.

Post-Harvest and Agro-Processing

- Establish post-harvest supply chains joint ventures in affordable, high-tech,structural and mechanical designs, and logistic systems combined with quality monitoring, prediction, and control methods towards a zero-waste fresh food chain.
- Encourage sustainable quality control practices within agro-processing operations, with efficient energy, water and waste management to make affordable and consumer trusted healthy processed foods ensuring food security. Provide technology transfer and innovation to enhance circular bio-economy practices for a sustainable agrifood chain that reaches all populations, leaving no one behind.

Climate Change and Resilience

- Incentivize climate smart, conservation and precision agriculture type mechanization and management systems, through comprehensive policies that are explicit and sensitive to climate change mitigation and adaptation and disincentivize soil and environment degrading practices. This should include increased training or/and support of extension agencies, financing incentives or/and targeted priority programs for institutions.
- Rate farming equipment and related systems (starting from manual and draught animal power systems) and its management options for goals of emission reduction and natural resource protection. Score agricultural practices relative to, e.g. Conservation Agriculture, quantitatively for GHG emissions and protection of natural resources and biodiversity

Digitalization and Automation

- Commit to development of technologies tailored to needs of small-holder farmers, enhancing their digital skills. Prioritize training and support for both farmers and service providers in making sustainable data-driven decisions. Establish a robust digital infrastructure that ensures open and equitable access, as a catalyst for sustainable increase of agricultural productivity.
- Pledge to amplify research and demonstration in automation and artificial intelligence, seamlessly integrating them into sustainable agri-food chains. Champion the growth of start-up ecosystems and innovative business models, particularly for small farmers and regions with lower incomes, to fast-track advancements in sustainable agricultural mechanization.

Supply Chain and Standards

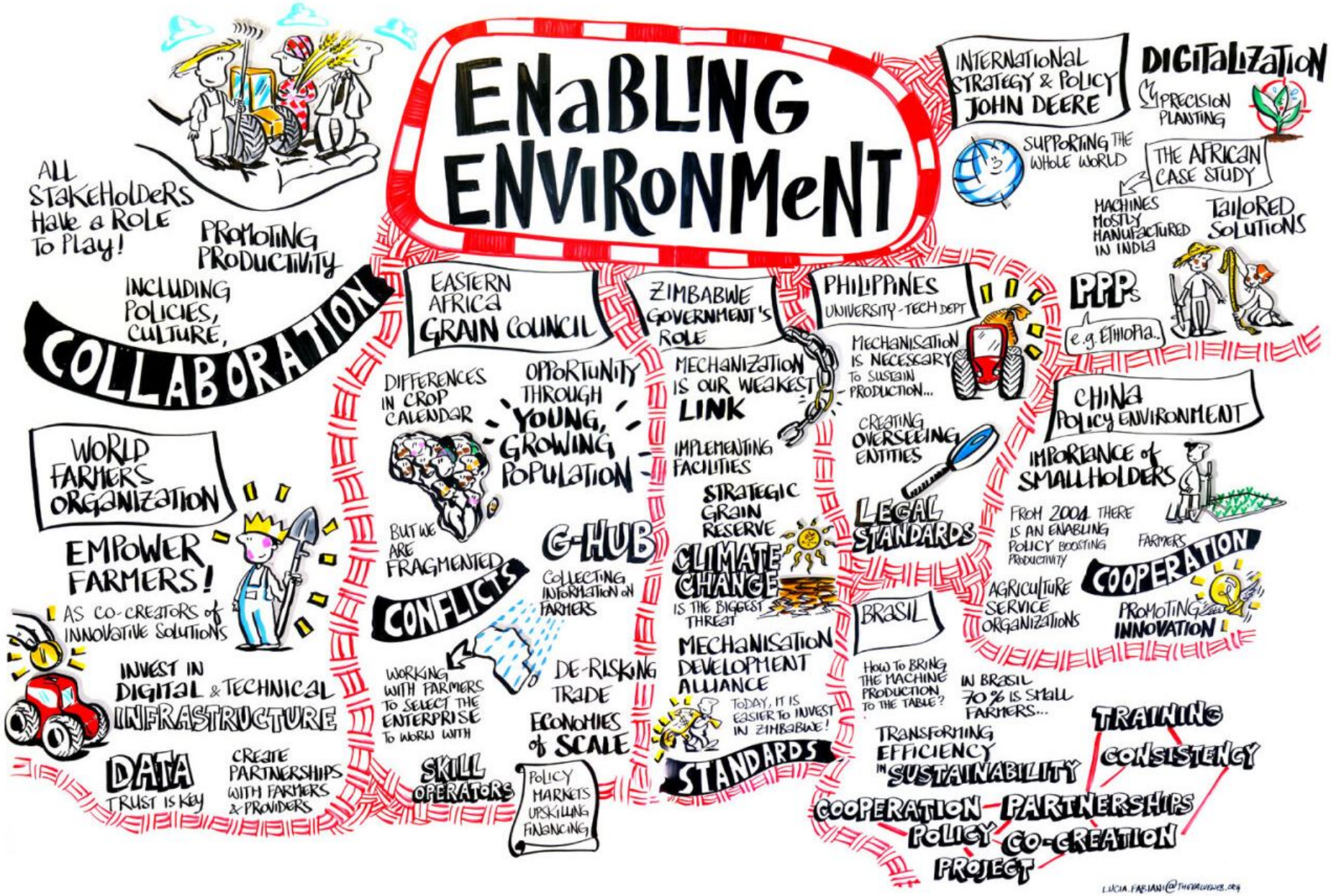
- Strengthen the supply chains for agricultural machinery, equipment and implements in developing countries by incentivizing/attracting suppliers and agribusiness to optimally utilize the capacity of local dealers and franchises as well as manufacturers to ensure competitive and continuous provision of services including capacity development of operators and after-sale services.
- Encourage the development and harmonization of standards, test protocols, certifications and data for agricultural machinery, to facilitate the trade of safe and well performing machinery. Facilitate the development and establishment of sub-regional and regional protocols for testing and certification of agricultural machinery, including gender inclusive design.

Business Models and Multi-Stakeholder Engagement

- Enhance business opportunities through comprehensive policies, programmes and institutional collaboration to incentivize, educate and enable farmers and entrepreneurs to develop capacity for local and national levels, meeting the mechanization and service provider needs.
- Promote innovative and inclusive business models along the value chain with involvement of farmers, financing institutions, small and medium scale entrepreneurs (SME) business owners and others to foster entrepreneurship in providing access to mechanization services.

Enabling Environment

- Strengthen national and international institutions to explicitly provide coordination and advice on Sustainable Agricultural Mechanization (SAM) and digitalization to the Government and other stakeholders ensuring representation by key public and private stakeholders.
- Create an enabling business environment to make mechanization services more accessible, available, affordable, and timely to all farmers through commercially viable enterprises.


ENABLING ENVIRONMENT
ALL STAKEHOLDERS HAVE A ROLE TO PLAY!
PROMOTING PRODUCTIVITY
INCLUDING POLICIES, CULTURE,
COLLABORATION
EASTERN AFRICA GRAIN COUNCIL
ZIMBABWE GOVERNMENT'S ROLE
PHILIPPINES UNIVERSITY-TECH DEPT
INTERNATIONAL STRATEGY & POLICY JOHN DEERE
DIGITALIZATION
PRECISION PLANTING
SUPPORTING THE WHOLE WORLD
THE AFRICAN CASE STUDY
MACHINES MOSTLY MANUFACTURED IN INDIA
TAILORED SOLUTIONS
PPPs
e.g. ETHIOPIA..
DIFFERENCES IN CROP CALENDAR
OPPORTUNITY THROUGH YOUNG, GROWING POPULATION
MECHANIZATION IS OUR WEAKEST LINK
MECHANISATION IS NECESSARY TO SUSTAIN PRODUCTION...
CHINA POLICY ENVIRONMENT
WORLD FARMERS ORGANIZATION
IMPLEMENTING FACILITIES
CREATING OVERSEEING ENTITIES
IMPORTANCE of SMALLHOLDERS
STRATEGIC GRAIN RESERVE
LEGAL STANDARDS
FROM 2004 THERE IS AN ENABLING POLICY BOOSTING PRODUCTIVITY
FARMERS
COOPERATION
EMPOWER FARMERS!
AS CO-CREATORS of INNOVATIVE SOLUTIONS
BUT WE ARE FRAGMENTED
CONFLICTS
G-HUB
COLLECTING INFORMATION ON FARMERS
CLIMATE CHANGE
IS THE BIGGEST THREAT
AGRICULTURE SERVICE ORGANIZATIONS
PROMOTING INNOVATION
BRASIL
MECHANISATION DEVELOPMENT ALLIANCE
HOW TO BRING THE MACHINE PRODUCTION TO THE TABLE?
IN BRASIL 70% IS SMALL FARMERS...
INVEST IN DIGITAL & TECHNICAL INFRASTRUCTURE
WORKING WITH FARMERS TO SELECT THE ENTERPRISE TO WORK WITH
DE-RISKING TRADE
ECONOMIES of SCALE
TODAY, IT IS EASIER TO INVEST IN ZIMBABWE!
TRANSFORMING EFFICIENCY IN SUSTAINABILITY
TRAINING
CONSISTENCY
DATA
TRUST IS KEY
CREATE PARTNERSHIPS WITH FARMERS & PROVIDERS
SKILL OPERATORS
POLICY MARKETS UPSKILLING FINANCING
STANDARDS
COOPERATION - PARTNERSHIPS
POLICY - CO-CREATION
PROJECT
LUCIA.FABIANI@THEVALUEWE.ORG

Side Event: Voices of Youth for Sustainable Mechanization and Digitalization

- Attract youth to work and innovate on mechanization and digitalization
- by creating entrepreneurship incubators,
- facilitating finance and subsidies,
- investing in mentorship programmes and
- enhancing their skills.

FAO Global Conference on Sustainable Agricultural Mechanization

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VALARANI PLOUGH SYSTEM (DETAIL)

Thank you.