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ALL ABOUT SUSTAINABLE AGRICULTURAL MECHANIZATION IN AFRICA

Joint Actions on Operationalization of the Framework for Sustainable Agricultural Mechanization in Africa (F-SAMA)

Framework for Sustainable Agricultural Mechanization in Africa [F-SAMA]: May 2023 Update

The Process of Developing of the F-SAMA

1. The **SAMA Framework** was developed through a consultative process involving key agricultural mechanization stakeholders drawn from different sub-sectors from all over Africa. This consultation process included, among others, the following events:
 - a. **Inception Workshop** attended by key stakeholders held in Addis Ababa, Ethiopia in July 2016 organized by FAO and AUC on the topic 'Sending the Hoe to Museum' where it was agreed to develop a 'Framework for Sustainable Agricultural Mechanization in Africa' [F-SAMA].
 - b. The FAO-SFE in collaboration with AUC- DREA facilitated **the preparation of the draft F-SAMA report** through consultations with RECs [EAC; ECOWAS; ECCA; SADC] and member countries during the period July 2016 to July 2017.
 - c. **A consultative regional meeting** on mechanization strategy was held in December 2016 with participation of stakeholders from all regions in Africa and beyond organized by African Union (AU), FAO, African Conservation Tillage Network (ACT), World Bank, AGRA, UNIDO and Agri-evolution. The [event](#) was hosted and coordinated by ACT with support of FAO and AGRA. An agreement was reached, in principle to establish an **information platform on SAM – Africa-Mechanize**.
 - d. **A stakeholder's conference** was convened by AUC and FAO-SFE in Addis Ababa in May, 2017 to review the draft report of the F-SAMA document.
 - e. The [SAMA Framework document](#) was finalized by AUC with technical support of FAO and officially launched by **the AUC and FAO in Rome, Italy in October 2018** as a side event of the meeting of the **Committee on Agriculture [COAG] of the FAO Council**.
 - f. The F-SAMA report can be downloaded from the FAO and AUC websites and is entitled' **FAO & AUC, 2018. Sustainable Agricultural Mechanization: A Framework for Africa** Addis Ababa. 127ppLicence: CC BY-NC-SA3.0 IGO; ISBN978 -92-5130871-4(FAO) c.FAO & AUC2018.
2. At the 2ACCA held in Johannesburg, South Africa on 9th-12th October 2018 there was a presentation on the progress attained by then in the development and validation of the F-SAMA program by AUC/FAO organs and that the final report had been formally launched in Rome, Italy during the preceding week. **The 2-ACCA welcomed the finalization** of the process of developing the F-SAMA report. In this regard, under the **Statement of Actions** released by ACT on **12th October 2018** in Johannesburg, South Africa in paragraph **12(g)** the **2ACCA** noted:

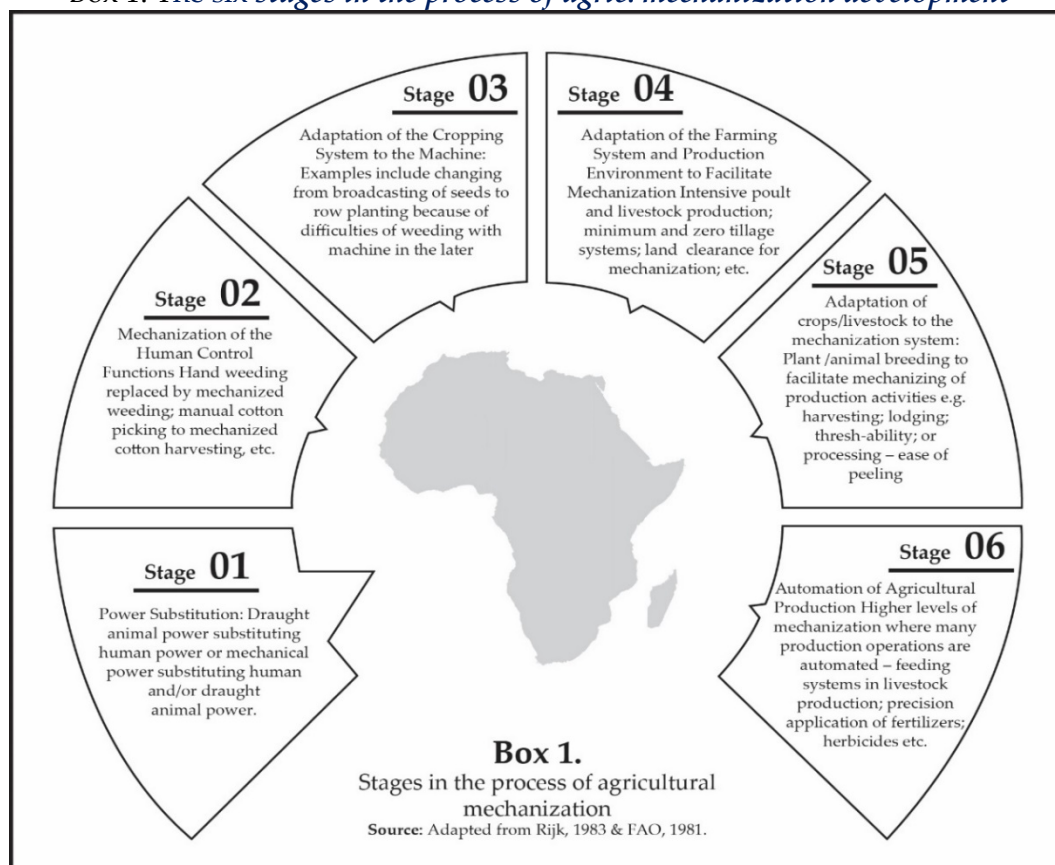
'Recognising that Sustainable Agricultural Mechanization (SAM) as an important enabler in accelerating widespread practicing of CA and attainment of the Malabo Declarations' Vision 25 x 25 and the Agenda 2063, urge ACT to advance appropriate African focused mechanisms and thrives that will largely deliver suitable SAM and support the propagation of self-sustaining development of the agricultural mechanization in Africa'.

3. This report to the 3ACCA highlights the contribution of ACT on its own and/or with other partners, in some of the actions taken and progress attained in the implementation of **the Framework for SAMA[F-SAMA]** during the **interim period between the 2nd and 3rd ACCA [i.e., from October 2018 to May 2023]**. In the first part in order of setting the scene, a brief **overview of the conceptual framework of the F-SAMA** is provided [*paras 4-9*]. This is followed in paras 10 – 33, which is the main section on **Operationalization of F-SAMA at National and Sub-Regional levels** and it is discussed under the following sub-headings:
- a. **Establishing an Institutional Framework for F-SAMA; [paras 10-16];**
 - b. **F-SAMA Activities 2019-2023 under the**
 - i. *Sending the hand-hoe to the museum:*
 - ii. *Webinar Series 2020-22*
 - iii. *DAMES Meeting and Formation of an Interim Committee*
 - iv. *Investment proposals under D4I and P-SAMA project documents*
 - c. **Possible recommendations to the 3ACCA**
 - d. **Conclusions**

Conceptual Framework of the F-SAMA

4. According to the F-SAMA and other reports, as of July 2017, agricultural mechanization in most SSA countries, is still at **stage 1** of the agricultural mechanization development process, despite concerted efforts to change the situation, by Governments, donors, and farmers over the past 60 years [1955-2015]. The stage 1, also known as the ‘*power substitution*’ stage, is characterized by the replacement of animate power [from human muscles and/or draft animals] with mechanical power from internal combustion engines or electric motors, to perform energy intensive tasks such as primary land preparation [see *Box 1 for the Six Stages of the agricultural mechanization development process*].

Box 1: The six stages in the process of agric. mechanization development



[From pg-5 of F-SAMA report]

Sustainable agricultural mechanization [SAM] for the SSA region must, therefore, include a focus on the adoption of sustainable land preparation and crop husbandry techniques, drawing lessons from the success achieved in other regions of the World, like Asia in changing the farm power situation from animate sources to mechanical ones during the past sixty years period against all the odds. In this respect, to succeed the SSA region will need to identify priority areas for SAM for different countries, agro-ecologies, and farming systems.

5. The F-SAMA therefore has ten priority elements with - **eight** of them clustered around **three sustainability pillars [Commercial, Environmental and Socio-economic]** and **two** elements are *overarching and cut across*. Each element has several options, and it is up to countries and sub-regions to decide on which one to select and pursue depending on prevailing local conditions [see **Box 2**]. Further, the F-SAMA extends the coverage on agricultural mechanization to include the entire food chain - from farming inputs through to on-farm production and harvesting to post-harvest processing issues as well as those of consumer protection and food safety.

Box 2: The Ten Elements of F-SAMA and the three sustainability pillars

<p>The ten elements are:</p> <p>A. UNDER THE COMMERCIAL SUSTAINABILITY PILLAR:</p> <ul style="list-style-type: none"> ● Element 1: Boosting availability of farm power through appropriate technologies and innovative business models. ● Element 2: Promoting innovative financing mechanisms for agricultural mechanization inputs. ● Element 3: Building sustainable systems for the manufacture and distribution of agricultural mechanization inputs. ● Element 4: Sustainable mechanization across agri-food value chains ● Element 5: Innovative systems for sustainable technology development and transfer. <p>B. UNDER THE ENVIRONMENTAL SUSTAINABILITY PILLAR:</p> <ul style="list-style-type: none"> i. Element 6: Sustainable transformation of land preparation and crop/animal husbandry practices <p>C. UNDER SOCIO-ECONOMIC SUSTAINABILITY</p> <ul style="list-style-type: none"> i. Element 7: Social sustainability and the roles of small-scale farmers, women and youth ii. Element 8: Human resources development and capacity building for SAMA <p>D. OVERARCHING ELEMENTS FOR SAMA:</p> <ul style="list-style-type: none"> i. Element 9: Need for a long-term vision: Policy and strategy issues. ii. Element 10: Creating sustainable institutions for regional cooperation and networking. <p style="text-align: right;"><i>[from pg. 82-83 of FAO & AUC, 2018].</i></p>
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6. In addition, the F-SAMA draws on the experience of other regions of the world which show that agricultural mechanization is successful when there is an effective demand for the outputs of farming (including those for on- and off-farm value addition) and sustainability has to be considered from an across the entire food chain perspective, including financing of capital investments. The debates on agricultural mechanization during the last quarter of the 20th Century were confined to on-farm production issues and failed to capture the off-farm utilization and requirements of mechanization inputs. Agricultural mechanization technologies do contribute significantly to programs for maintaining the rural infrastructure and increasing employment opportunities especially for youth and women in the rural areas.
7. The dominance of small holder farmers across the Africa region needs to be factored in through the development and implementation of strategies and modalities that facilitate their receiving services from larger items of agricultural machinery such as tractors, harvesters, and threshers. This will include, among other ways, development of business models specifically for the

provision of mechanization services to small-scale farmers and the design of equipment that is best suited to their needs or through empowering farmer organizations to facilitate availing to them agricultural machinery and equipment through efficient and effective custom hiring services.

8. Experience gained from mechanization policies and strategies of other regions of the world during the past six decades, shows that it was the **medium- and large-scale farmers [MSFs & LSFs]** who spearheaded mechanization efforts as they were the ones who were able to procure agricultural machinery and implements and provide mechanization services to **small scale commercial farmers [SSCFs]** and **peasant subsistence farmers [PSFs]**. They were also the ones who were able to set up and sustain **the farmer support institutions** required for **commercial agriculture to thrive** – especially for *input supply and output processing and marketing*. They are therefore important in the design and implementation of F-SAMA programs and projects.
9. Finally, F-SAMA recognizes the unique characteristics of each country due to the ecological heterogeneity and the wide range of farm sizes, and in this regard, **it avoids being prescriptive**. Instead, **F-SAMA provides ten interrelated principles/elements to guide the agricultural mechanization efforts and investments** over the next several decades. This approach entails the identification and prioritization of relevant and interrelated elements to help member countries and sub regions develop strategies and practical development plans that create synergies in line with their agricultural transformation plans and prevailing local conditions.

Operationalization of the F-SAMA at National & Sub-regional Levels

Establishing an institutional framework for F-SAMA

10. A workshop was convened, on 23-24 May 2019, by FAO-RAF jointly with the AUC in Addis Ababa and attended by key stakeholders on the topic '*Advancing the Operationalization of the SAMA Framework.*' Also, in May 2019 FAO and ACT signed, in Rome Italy, an MoU to, among other things, support the implementation process of the SAMA Framework. Initial activities commenced with the two partners engaging sub-regional and national partners during a [regional workshop](#) held in Kampala in November 2019. Activities discussed included preparation by FAO-RAF of a concept note on possible activities involving, *youth and women in agricultural mechanization*, opening of *Hand-hoe museums* in Angola and Burkina Faso jointly with the AUC, as well as facilitating the initial steps aimed at the creation of institutional mechanisms to coordinate F-SAMA activities at regional, sub-regional and national levels. These efforts by FAO-RAF involved also the cooperation with other parts of FAO including the extensive network of the FAO Representatives [FAORs] present in all African countries; the four FAO Sub-Regional Coordinators [FAO-SRCs] located in Addis Ababa [for East Africa]; Harare [for Southern Africa]; Dakar [for Western Africa] and Libreville [for Central Africa] and the FAO Headquarters in Rome as well as other agencies like the AfDB, UNIDO; UNDP and the World Bank.
11. The extensive FAO network of FAORs and FAO-SRCs under the overall leadership of FAO-RAF has close policy and operational links with key mechanization stakeholders at national [including the *Directors of Agricultural Mechanization and Engineering Services [DAMES]* as well as those of *Agricultural Policy*] and at sub-regional levels [including all the RECs] as well as at continental levels [including with AUC, UNECA and AfDB] and at global levels [including with the CGIAR centres; World Bank; UNIDO; UNDP and WTO]. It was decided therefore, to the extent possible, to optimally use this extensive network and institutional infrastructure of FAO during the rollout and the implementation of the F-SAMA programs at all levels especially at regional and sub-regional as well as national levels.

12. After due consultations between FAO and the AUC, it was decided to initiate joint activities on F-SAMA between FAO-RAF and the **African Conservation Tillage Network [ACT-Network]**. The ACT Network has been implementing joint projects on conservation agriculture and agricultural mechanization with Divisions at FAO-HQ [AGS & AGP] starting from 2005 and in 2019 it signed an MoU with FAO – through the AGP - for further cooperation. ACT therefore provided an institutional and organizational mechanism for immediate joint action on F-SAMA activities in Africa which could be utilized. Following the 2ACCA held in South Africa in 2018, ACT has been reviewing its operational mandate to broaden it from one confined to *conservation tillage and agriculture* to a broader one which also embraces *sustainable agricultural mechanization*. It is important to note that Conservation Agriculture [CA] has been successfully implemented and adopted in regions of the World where agricultural mechanization [higher levels of farm power utilization] has been developed to reach mature equilibrium [e.g., North America, Australia and Latin America]. As noted in the F-SAMA report much of SSA is still at the very first stage of agricultural mechanization [i.e., the farm power substitution stage from animate to mechanical sources.
13. Following the December 2016 Conference organized by, among other organizations, FAO, AGRA and ACT, it had been recommended that an information platform on sustainable agricultural mechanization in Africa be established and ACT was requested to take a lead in this activity. ACT has accordingly worked on this and established such an information platform – **Africa-Mechanize**. It was therefore decided to use this platform and link it up, through the extensive institutional infrastructure of FAO-RAF, with key stakeholders of F-SAMA in SSA. Through this linkup between *Africa Mechanize & F-SAMA virtual discussion sessions* were organized on F-SAMA. Also, AfricaMechanize was used to convey information on SAMA projects and programmes to key stakeholders including **Directors/Heads of Agricultural Mechanization & Engineering Services [DAMES/HAMES]** of Ministries of Agriculture in member countries. It also availed to the F-SAMA stakeholders, such as the public and private sector R & D organizations as well as financial institutions, an efficient modality for information exchange including the transfer and exchange of information on the best practices and technologies.
14. As has been noted in the F-SAMA report, a critical problem of agricultural mechanization in SSA has been lack of information on successful and/or failed projects on which to draw useful lessons on why they succeeded and/or failed. Such information could be quite useful to DAMES/HAMES as they develop their implementation programs on F-SAMA. While there have been quite many papers published in international journals on agricultural mechanization in SSA – these have at times tended to be too prescriptive and often based on rather rapid and often rudimentary analysis. In some cases, these have tended to mystify agricultural mechanization in Africa. It is important to debunk such myths and Africa-Mechanize offers an avenue of doing so provided it is linked to key stakeholders involved in the public and private sectors in SSA. The AUC and FAO-RAF therefore initiated discussions/dialogue with DAMES/HAMES using the FAO-RAF links with FAORs on F-SAMA through the Africa-Mechanize platform. It is envisaged that the dialogue would include publication of a *Newsletter* with current information on F-SAMA initiatives at the country and regional levels as well as **Discussion Reports/Essays** on contemporary issues which have appeared in recent publications and analysing them to provide key stakeholders with an opportunity to virtually comment on the same. This will debunk some of the myths on agricultural mechanization in SSA and facilitate the establishment of a more informed scenario.
15. The interactions which occurred during this period as indicated above were also used to create a participatory environment to facilitate the establishment of a regional implementation mechanism of F-SAMA, involving among others, the DAMES/HAMES [who are critical to the success of the same]. It will also be more gradual and give stakeholders time to ruminate on the issues involved rather than appearing to impose a regional institutional structure. Similar process was used in the creation of regional mechanisms for agricultural research [ASARECA; CCARDESA; CORAF and FARA] as well as for other sub sectors like the fertilizer [AFAP]. Poignantly the very successful **CSAM – Centre for Sustainable Agricultural Mechanization** in the Asia Pacific Region evolved through a similar process from the 1970s as a *Regional Network for Agricultural Mechanization [RNAM]* under UNESCAP to *Asia Pacific Centre for Agric. Engineering and Mechanization [APCAEM]* in late 1990s to early 2000 before evolving ultimately

to a *Centre for Sustainable Agricultural Mechanization [CSAM]* in 2012 still under the auspices of UNESCAP but operationally under a Board of Trustees with strong representation of the DAMES of member countries as well as the private sector.

16. The ideal setting would have been for AUC and FAO to organize a meeting of DAMES and other key stakeholders to discuss and roll out of the planned activities for F-SAMA including their envisaged role in the implementation of the same. However, **given the COVID-19 pandemic which prevailed during the period 2019-2022**, it was not possible to convene such meetings. Therefore, linking the AfricaMechanize with the FAO institutional infrastructure availed to Africa, mechanisms of organizing a series of virtual webinars and workshops leading to the initiation and implementation of preliminary F-SAMA activities between 2019 -2022 as will be explained below.

F-SAMA Activities 2019 to 2022

- **Sending the Hand hoe to the Museum:**

17. The African Union Commission (AUC) in collaboration with the Government of Burkina Faso and with support from FAO and other international and regional organizations organized an event on “**Retiring the hand hoe to the museum**” in *Bobo Dioulasso, Burkina Faso on 14 and 15 October 2019*. The event was a continuation of the campaign to confine the hand-held hoe to the museum that was initiated by the former African Union Commission (AUC) Chairperson, Dr Nkosazana Dlamini Zuma during the 25th African Union Heads of State Summit in South Africa in 2015. During the event, a monument symbolizing the end of the hand-held hoe as the main tool for agricultural production in Africa was inaugurated. The monument challenges political decision-makers in African governments to give priority to agricultural mechanization as an area for strategic investment as subsequently enunciated in the Framework for Sustainable Agricultural Mechanization in Africa (F-SAMA). Activities included collecting hand hoes from selected women groups involved in agriculture in exchange for small-scale equipment such as power tillers with implements and trailers, planters and rice transplanters. The event was officiated by Madam Clementine Dabiré, the spouse of the Prime Minister of Burkina Faso who represented the First Lady of Burkina Faso Madam Sika Bella Kaboré. The Prime Minister of Burkina Faso H.E. Christophe J. M. Dabiré as well as the Minister of Gender from Ghana and the Secretary of State to the Minister of Agriculture in charge of Rural Development and Equipment of the Republic of Mali attended the event.

- **F-SAMA Webinar Series**

18. A series of 10 webinars to operationalize the F-SAMA were held between November 2020 and November 2022, organized under the Africa Mechanize Platform www.africamechanize.org. The First Webinar held in November 2020 was titled “*Introducing F-SAMA including the Africa-Mechanize Platform: Targeting Heads or Directors of Agricultural Mechanization & Engineering Services (HAMES/DAMES)*”. Lead panelists included H.E. Ambassador Josefa Sacko, Commissioner for Agriculture, Rural Development, Blue Economy and Sustainable Environment (AUC-ARBE); Abebe Haile Gabriel, Assistant Director General (ADG), FAO Regional Office for Africa; Geoffrey C. Mrema, Sokoine University of Agriculture, Tanzania; Joseph Mpagalile and Josef Kienzle (FAO); DAMES/HAMES from Uganda (Boniface Okanya); Tanzania (Anna Mwangamilo); Ghana (Amatus Deyang); and Saidi Mkomwa of the African Conservation Tillage Network (ACT). Participants included 214 participants from 45 countries and 10 speakers. More information on this can be obtained/downloaded/found at: <https://www.africamechanize.org/webinar-1/?tk=1643300866>.
19. The **Second Webinar** held in December 2020 had the title “*Private and Civil sector promotion of SAM in SSA along the entire value chain*”. The two cases presented were: *How the private sector is promoting agricultural mechanization in SSA-* by Stewart Pirnie, CEO, AgLeaseCo, Zambia; and *promoting agricultural mechanization along the food value chain in East Africa* by Dr Birungi Korutaro, CEO, Kilimo

Trust, Uganda. Others were country updates on status of agricultural mechanization promotion and development: Walendom Mbetemgar (Chad), Marius Aina (Benin) and Dadi Richard (Ivory Coast). The webinar had 13 speakers with 161 participants from 48 countries. Details at: <https://www.africamechanize.org/webinar-2/?tk=1643300974>. The **Third Webinar** held in March 2021 had the title “*Different Pathways to Promote, Access and Use of Mechanization in Nigeria and Cameroon*” and was presented by Fombin Valentine, Deputy Director, Agric. Engineering Directorate, Cameroon; and Eng. Abdullahi G. Abubakar, Director of Agricultural Mechanization, Federal Government of Nigeria. The webinar had 6 speakers and 237 participants. More details available at: <https://www.africamechanize.org/webinar-3/?tk=1643302872>.

20. The **Fourth Webinar** held in early May 2021 was on a Discussion Essay titled *Impact of Paradigm Shifts on the Development of Agricultural Mechanization in SSA: A Case Study of Farm Power* was presented by Prof Geoffrey Mrema, Agricultural Mechanization Expert, Sokoine University of Agriculture, Morogoro, Tanzania. There were 135 participants. Details are available at: <https://www.africamechanize.org/webinar-4/?tk=1643302963>. The **Fifth Webinar** was held in late May 2021 and had the title *Promoting innovative financing mechanisms for sustainable agricultural mechanization*. Keynote presentations were made by Christiane Ströh de Martínez and Corinna Strohbach, Consultants, Joyn-Coop. The Webinar had six speakers and 265 participants. Details available at: <https://www.africamechanize.org/webinar-5/?tk=1643303265>. The **Sixth Webinar** held in August 2021 was titled *Promotion and development of sustainable agricultural mechanization in Africa: Cases of Senegal and South Africa*. The Case studies were presented by: Samba Kanté, Director of Agric. Mechanization, Ministry of Agriculture, Dakar, Senegal; and Klaas Mampholo, Deputy Director LandCare, Land Use and Soil Management, Ministry of Agriculture, Land Reform and Rural Development, South Africa. The Webinar had 7 speakers and 251 participants. Details available at: <https://www.africamechanize.org/webinar-6/?tk=1643303323>.

21. The **Seventh Webinar** held on October 2021 was titled *Enhancing social sustainability and the roles of women and youth in agricultural mechanization in Africa*. The lead presentation was made by Miriam Heidtmann of GIZ and Caroline Mutepfa, AUDA-NEPAD, ATVET4W. Elizabeth Nsimadala, President of the Pan African Farmers Organization (PAFO) and East African Farmers Federation (EAFF) made the opening remarks. The webinar had 6 speakers and 162 participants. Details available at: <https://www.africamechanize.org/webinar-7/?tk=1643303367>. The **Eighth Webinar** held in **December 2021** was titled “*Lessons learned from the 2021 Africa Mechanize Webinar series and planning for 2022*”. The lead presentation was made by Africa Mechanize Secretariat – Eng. Saidi Mkomwa (Executive Director) and Prof ElHassane Bourarach (Technical Advisor). Others were Directors of Mechanization from Ethiopia (Bereket Forsido), Tanzania (Anna Mwangamilo), Sierra Leone (Abdul Rahman Kamara), Madagascar (Andriamady Rondromalala), Cameroon (Valentine Fombin). Details available at: <https://www.africamechanize.org/webinar-8/?tk=1643303447>.

- **Meeting of D/HAMES & establishment of an Interim Network Steering Committee:**

22. On Thursday, 31 March 2022, DAMES from various African countries and other key stakeholders convened virtually to actualize the establishment of operational structures for implementation of the Framework for Sustainable Agricultural Mechanization (F-SAMA) at sub-regional and regional levels. The webinar was jointly organized by the Food and Agriculture Organization of the United Nations (FAO), the African Union Commission (AUC) and the African Conservation Tillage Network (ACT) and attracted 68 invited participants, including HAMES from 30 countries and five representatives of four Regional Economic Communities (RECS).

23. Under the shared Session Chairpersonship of DAMES from Madagascar, Senegal, Sierra Leone and South Africa and under the overall shared facilitation of the Head of Agriculture and Food Security Division of the AUC and the Leader of the FAO Sustainable Agricultural Mechanization group at the FAO, the meeting resolved as follows:

- i). Participants called for expedited actions towards collaboration among the HAMES. This is based on the understanding that many challenges have caused continued stagnation and decline in agricultural mechanization in Africa, and on the recognition of the little or no exchange of information and knowledge sharing.
 - ii). Participants agreed on the urgent need for establishing a formal network for the DAMES to realize the long-term vision for mechanization in Africa based on the ten elements of F-SAMA.
 - iii). In view of its critical role in supporting agricultural transformation in Africa, participants agreed to formally work together in operationalizing F-SAMA to accelerate access and use of agricultural mechanization in SSA.
24. Following this Webinar, **an Interim Steering Committee of HAMES** was formed to oversee formation network for the DAMES. The immediate tasks of the Interim Steering Committee [ISC] were agreed upon during the meeting. Consequently, the Committee was tasked to execute the assigned tasks, and report back progress to the Assembly of the HAMES. FAO has supported this initiative by engaging a consultant to support the ISC by preparing a report highlighting (i) Network structures comprising of regional setup and representation, leadership, membership (ii) **Framework for Action (FFA)** for up to 4 years and (iii) Potential areas for development of concept notes. This support is expected to expedite the establishment of operational structures for the implementation of the F-SAMA at Sub-Regional and Regional Levels.
- **Project Development Efforts and Investment Programme:**
25. In February 2019, FAO and ACT signed, in Rome, Italy, an MoU to, among other things, support the implementation process of the SAMA Framework. The MoU was renewed in 2022. Initial activities included engagement by the two partners of regional and national partners during a regional workshop held in Kampala in November 2019. This has included, inter alia, preparation by FAO-AGP and FAO-RAF of a concept note on the **Program for Sustainable Agricultural Mechanization for Africa (P-SAMA)**. The goal of the programme is to improve access and uptake of SAM technologies and innovations along the value chain for enhanced agricultural productivity among small and medium scale farmers.
26. The extensive FAO network of FAORs and FAO-SRCs under the overall leadership of FAO-RAF maintains close policy and operational links with key agricultural and mechanization stakeholders at various levels; starting from the national level [including the DAMES/HAMES], through to the sub-regional level [including all the RECs], and to the continental levels [including with AUC, UNECA and AfDB as well as at global levels [including with the CGIAR centres; World Bank; UNIDO; UNDP and WTO]. Therefore, it is important and to the extent possible, to optimally utilize this extensive network and institutional infrastructure of FAO during the rollout and the implementation of the SAMA programmes at all levels especially at regional and sub-regional as well as at national levels.
27. To support operationalization of Element 10 of the F-SAMA, which has recommendations on institutional framework for implementation of SAMA in SSA, the P-SAMA will also need to support strengthening of the Africa-Mechanize Platform. This could include building capacity of the AUC to develop and churn quality bankable project proposals for SAM infrastructure and templates for national and private sector partners.
28. As part of the FAO-ACT Network partnership, ACT with support from FAO, commissioned a study to develop **Directions for Investment (D4I) in Sustainable Agricultural Mechanization in Africa** in 2021. This study assignment entailed carrying out analysis of the interlinked social, economic, institutional and environmental conditions to identifying entry points needed for leveraging investments in SAM along the entire agrifood value chain in line with AUC-FAO Framework for sustainable agricultural mechanization in Africa (F-SAMA) and the National Agricultural Investment Plans (NAIPs).

29. After extensive literature reviews and analyses as well as interviews and consultations in selected African countries (Benin, Cameroon, Ethiopia, Ghana, Kenya, Tanzania, Nigeria and Zambia), key informants and expert opinion, six priority areas of investment in sustainable agricultural mechanization in Africa were identified. The six priority areas of investment are: (i) Strengthening mechanization and development of agricultural value chains; (ii) Strengthening mechanization of climate smart agriculture; (iii) Strengthening capacity for agricultural mechanization; (iv) Improving management of agricultural mechanization knowledge; (v) Improving measurement of agricultural mechanization performance; (vi) Establishing mechanization enabling environment and innovative financing.
30. The key players that should be targeted in the increased investment in SAM should include small and medium scale (SMS) farmers/producers; small and medium enterprises (SMEs); agro dealers and local entrepreneurs; agribusiness entrepreneurs; transporters; postharvest handlers; processors; whole sellers and retailers; machinery, equipment and implement manufacturers and dealers; mechanization based service providers; financial institutions and insurance providers; African regional and sub regional organizations/communities; and research, extension and academic institutions among others.
31. International technical and financial institutions and organizations have a role to play in bringing their expertise and financial support to bear on the problems and challenges of establishing SAM in the African countries. Some of the relevant institutions and organizations include the United Nations Food and Agriculture Organization (FAO), The United Nations Industrial Development Office (UNIDO), The European Agricultural Machinery Association (CEMA) as well as International financial institutions, development partners and multilateral development banks among others.

F-SAMA Next Steps Activities, 2023 (TBD)