Bringing evidence to bear on negotiating ecosystem service and livelihood trade-offs in sustainable agricultural intensification in Tanzania, Ethiopia and Zambia as part of the SAIRLA program

Participatory Identification of Prioritized SAI Practices and Indicators of Success

Ziway, Ethiopia 27 February 2017

Workshop report

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Suggested citation:

1. Introduction and welcome note

The World Agroforestry Centre (ICRAF), in collaboration with Central Ethiopia Environment and Forest Research Center organized a participatory workshop with farmers on February 27, 2017 in Ziway, Ethiopia. The workshop was facilitated by Diriba who welcomed the workshop participants to the second SAIRLA workshop meeting for participatory identification of SAI interventions and indicators of success. Diriba invited Ato Hussien Urgessa (Adami tulu Jido Combolcha Woreda Agriculture Office Head) to make the opening speech. Ato Hussian mentioned that, local farmer participation and experience sharing was highly important for the workshop meeting. He asked participants to be active on the workshop session and to capture key lessons for further implementation. Self-introduction of participants was conducted and the workshop was officially opened.

Figure 1: Opening session.

2. Presentation sessions

Hadia Seid briefly presented the achievements so far of the SAIRLA project. This workshop is a follow-up of the Stakeholder Mapping workshop held on September 29, 2016.
The workshop objectives included:

1) To identify the vision of agriculture for the farming community – by gender
2) To identify gendered farmers' indicators of success for agricultural systems

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3) To develop a prioritized list of SAI practices by gender
4) To identify 'root causes' of non-adoption of SAI
5) To identify farmers willing to trial the SAI options on their farms.

3. Disaggregation of Workshop participant

The workshop participants were from four districts in East shewa zone specifically, from Adami tulu (Ziway/ Batu), Dugda (Meki), Bora (Alem tena) and Lume (Mojo) district in the rift valley. Thes districts' agro-ecological zones (AEZ) are dominated by moist lowland and dry lowland areas. Adami tulu and Dugda districts are considered dry lowland agro-ecological zones while Bora and Lume districts are considered as moist lowland agro-ecological zones.

Focus group discussions during the workshop were conducted based on the AEZ. Participant's gender base disaggregation is summarized in the table below.

Table 1: Number of participants disaggregated by gender and AEZ

Agro Ecological Zone	Female	Male	Total
Moist lowland	6	9	15
Dry lowland	5	8	13
TOTAL	**11**	**17**	**28**

Figure 2: Workshop participants in Ziway.

4. Group works and feedbacks

Based on their respective AEZ and gender, four groups were formed and in each group, a chairperson, 2 note takers and 1 presenter were identified. For focus group discussions, participatory identification of SAI intervention sites and farmer exercise guide was followed with local language translation.

Figure 3: Focus group discussion.

4.1. Objective1: Identifying the vision of agriculture system for the farming community

Participants were asked to visualize the agricultural situation in their respectively agro-ecological zone for the three different time periods: 10 years back, current time, and 10 years from now. The results are presented below.

Table 2: *Agricultural situation described by women from the moist lowland agro-ecological zone*

Past 10 years	Present	10 years in the future
Better natural forest cover and low forest degradation	Deforestation becomes alarmingly increased due to charcoal production, on the other hand there is some start in tree planting activity but post planting management practices still remains a great challenge	Restoration and soil water conservation practices will be undertaken.
More crop yield due to better soil fertility status	Low productivity due to a decrease in soil fertility	Improved input supply and will enhance crop productivity
Low agricultural input and technology access	Some improvement in input supply like inorganic fertilizer	Improved pure water access

Poor infrastructure (health and school facility and access road)	Feeder road constructed, Health services and schools constructed but they lacks equipment and qualified manpower	Improved public facilities and quality of services
No microfinance service	Some microfinance access	Improved HH income
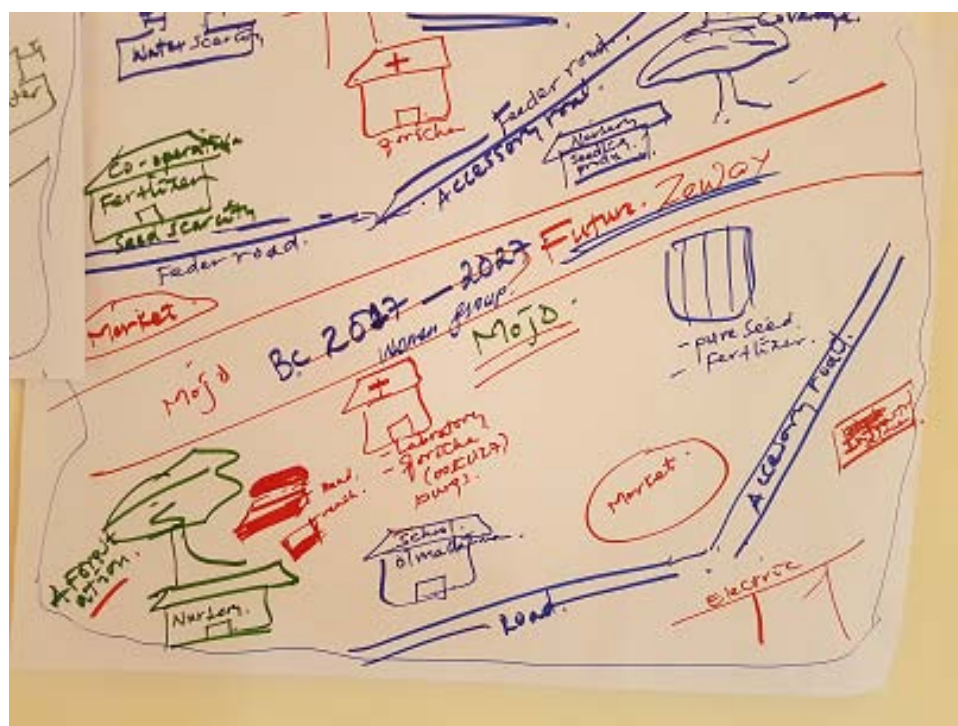
Figure 4: Visualization maps by women from the moist agro-ecological zone.

Table 3 Agricultural situation described by men from the moist lowland agro-ecological zone.

Past 10 years	Present	10 years in the future
Limited public facility such as health care, offices and elementary school	Improvement on health services, school and road construction	Local university will be constructed
High crop production	Low productivity due to decreased soil fertility	Improved input supply and will enhance crop productivity

|		
Poor water access	Access to Pure water improved	Home garden AF practices will be integrated
More livestock number and no veterinary services	Veterinary service started	Market places and Microfinance services will expand
Traditional farming practices	Farmers Training center constructed	Nursery site will be established

Figure 5: Visualization maps by men from the moist lowland agro-ecological zone.

Table 4: Agricultural situation described by women from the dry lowland agro-ecological zone.

Past 10 years	Present	10 years in the future
Better forest cover and grazing land	Decrease in forest land cover and grazing land production due to over exploitation of resources	Promote tree planting at wider scale and will perform soil and water conservation practices

| Uniform rainfall amount and distribution	Variation in rainfall amount and distribution due to climate variability	Different agro industries will be opened
High crop yield	High crop yield due to application of high amount of inorganic fertilizer	Improved input access and market linkage
Low population number	Increased in population number and limited job opportunity	Female farmer participation and number of model farmers in the agriculture production system will be increased.
Small scale irrigation started	Decreased amount water in lake ziway	
Pure water access locally	Water shortage for farming practices	There will be application Water harvesting technologies
Limited public facility services	Some improvement on public services	
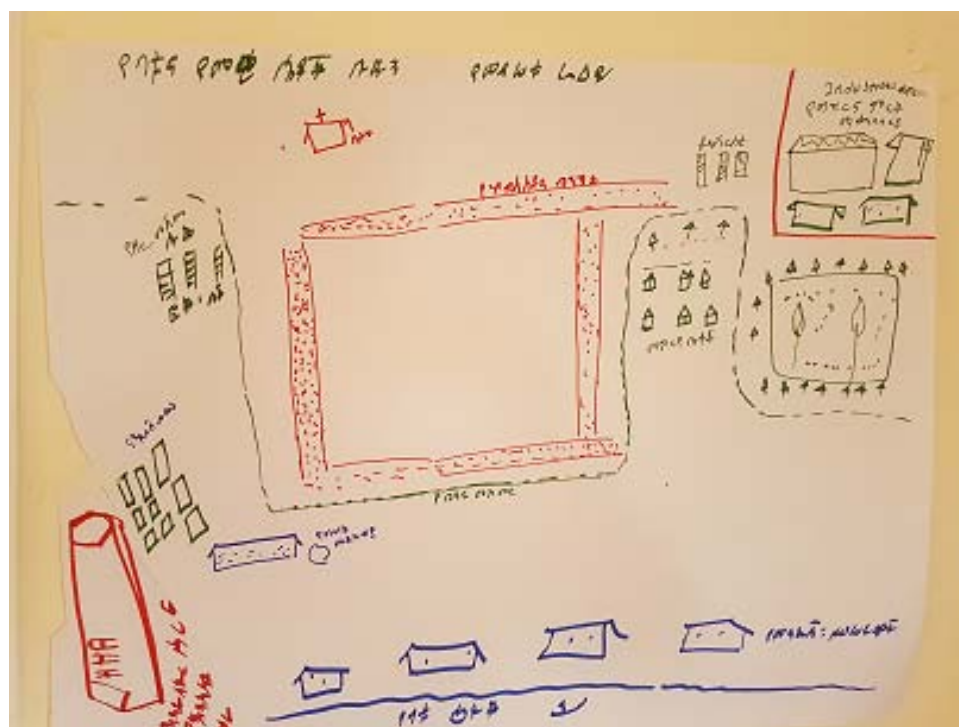
Figure 6: Visualization maps by women from the dry lowland agro-ecological zone.

Table 5: Agricultural situation described by men from the dry lowland agro-ecological zone.

| Past 10 year	Present	10 year in the future
More natural forest cover	Crop land expansion on forest land and grazing land	Degraded forest areas will be restored
Large grazing land area	Grazing land unproductive due to degradation	Grazing lands will be managed as area enclosures
Limited soil erosion	Soil erosion increase and gully formation	Home garden agroforestry and agronomy practices will be integrated
Poor public facility and services such as one elementary school was available	Some improvement on school and health center construction	Public facilities services will improved
High production	Improvement on inorganic fertilizer and improved seed access and utilization	Improved technology and small scale mechanized farming will be applied
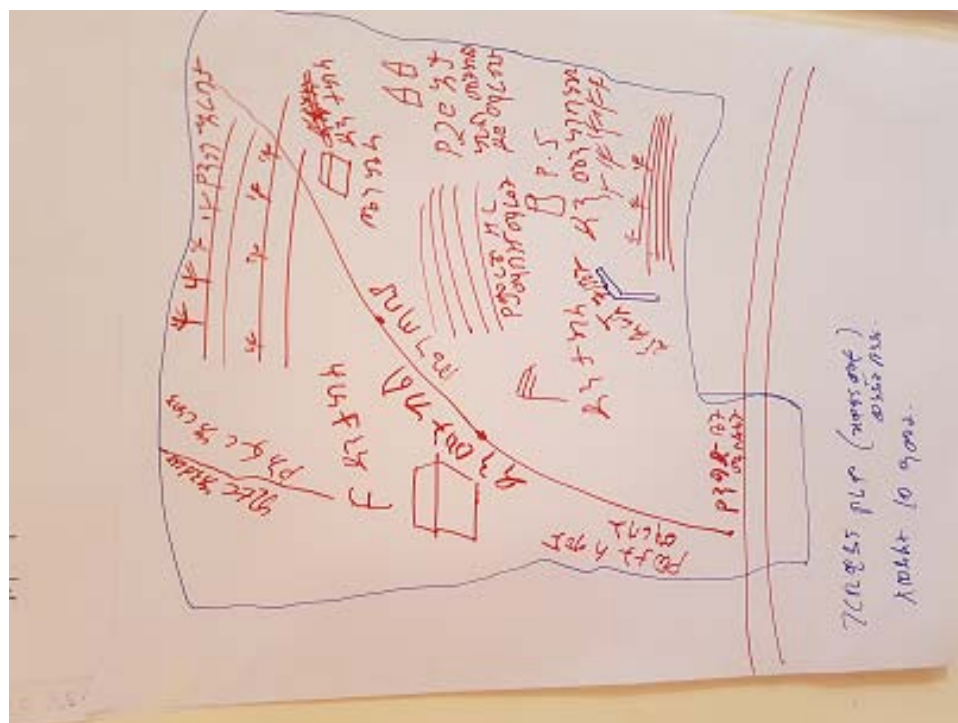
Figure 7: Visualization maps by men from the dryland agro-ecological zones.

4.2. Objective 2: Identifying farmers' indicators of success for agricultural systems

Firstly, each group identified their indicators of success through discussion. We later advised them to agree on the best five indicators. The indicators were listed in flip charts, with column space for each member to give his/her point ranking for each indicator. Ranking ranged from 1 to 5, with 5 being the highly ranked. Participants were not allowed to give equal weights (same number of beans seeds) to more than one indicator. Average was then calculated for the group for each indicator, which enabled their ranking based on the average scores.

Indicators and ranking for each group are shown in the tables below.

Table 6: Ranking of indicators of successful agriculture by women from the moist lowland agro-ecological zone.

No	Indicator	Ranks							Average
1	better life style /more income per year	5	5	5	5	5	5	5	5
2	more crop yield per year	4	3	4	4	4	1	3	3
3	proper planning and implementation	2	4	2	3	3	3	1	3
4	Having saving services	3	2	1	1	2	4	2	2
5	improved seed and fertilizer utilization capacity	1	1	3	2	1	2	4	2

Figure 8: Ranking of indicators of successful agriculture by women from the moist lowland agro-ecological zone.

Table 7: *Ranking of indicators of successful agriculture by men from the moist lowland agro-ecological zone*

No	Indicator	Ranks								Average
1	Educating children	1	1	2	3	2	2	2	2	1.875
2	Building good house in the town	2	2	4	2	1	1	1	1	1.75
3	Apply best management practice	3	3	5	5	5	5	4	4	4.25
4	Benefited from farm extension services	4	4	4	4	4	4	5	5	4.25
5	visionary model farmer	5	5	1	3	3	3	3	3	3.25

Figure 9: Ranking of indicators of successful agriculture by men from moist lowland agro-ecological zone.

Table 8: Ranking of indicators of successful agriculture by women from the dry lowland agro-ecological zone.

No	Indicator	Ranks						Average
1	Mechanized farming utilization	1	1	5	5	5	2	3.2
2	Educating children at university level	3	5	3	4	3	4	3.7
3	Nutrition security	2	4	1	2	1	5	2.5
4	Building house in the town	4	3	4	3	2	3	3.2
5	capacity to livestock fattening	5	2	2	1	4	1	2.5

Figure 10: Ranking of indicators of successful agriculture by women from the dry lowland agro-ecological zone.

Table 9: Ranking of indicators of successful agriculture by men from the dry lowland agro-ecological zone.

No	Indicator	Ranks							Average
1	crop diversification	5	4	4	5	2	4	4	4
2	Improved technology application	4	5	5	4	3	3	2	4
3	Better educating children	3	3	3	2	4	1	1	2
4	Building house in the town	2	2	2	1	5	2	3	2
5	proper planning and implementation	1	1	1	3	1	5	5	2

Figure 11: Ranking of indicators of successful agriculture by men from the dryland agro-ecological zone.

4.3. Objective 3: Developing a prioritized list of SAI practices

For prioritizing SAI practices, facilitators provided a table of selected SAI practices and participants were oriented to select best of six potential SAI practices that can be tested. They then ranked the prioritized SAI practices based on its suitability to their AEZ and area of interest. The

results of the prioritization and ranking of SAI practices by gender and agro-ecological zones are shown in the Tables below

Table 10: Ranking of SAI practices by women from the moist lowland agro-ecological zone.

No	Prioritized SAI practice	Ranks							Average
1	Home garden AF practices	6	6	6	5	5	6	5	5.57
2	Inorganic fertilizer	4	5	5	3	4	5	3	4.14
3	On farm Soil and water conservation	3	4	4	6	3	4	6	4.29
4	Afforestation and reforestation	5	3	3	4	6	3	4	4.00
5	Intercropping	2	2	2	2	2	2	2	2.00
6	On farm AF practices	1	1	1	1	1	1	1	1.00

Figure 12: Ranking of SAI practices by women from the moist lowland agro-ecological zone.

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Table 11: Ranking of SAI practices by men from the moist lowland agro-ecological zone.

No	Prioritized SAI practice	Ranks							Average
1	Swc (biophysical measure)	6	5	6	6	6	6	6	5.85
2	Improved seed multiplication	2	3	3	5	4	4	2	3.28
3	On farm AF practices	4	6	5	3	3	5	3	4.14
4	Crop diversification	5	4	2	4	5	3	4	3.85
5	Home garden AF practices	3	2	1	1	2	2	1	1.7
6	Compost preparation and application	1	1	4	1	1	1	5	2

Figure 13: Ranking of SAI practices by men from the moist lowland agro-ecological zone.

Table 12: Ranking of indicators of successful agriculture by women from the lowland agro-ecological zone.

No	Prioritized SAI practice	Ranks								Average
1	On farm swc and tree seedling production	6	6	6	6	6	6	5	6	5.87
2	Area enclosure for communal lands	3	5	5	5	4	5	6	5	4.75
3	Compost preparation and application	4	4	3	2	5	4	4	4	3.75
4	On farm AF practices	5	3	4	3	2	3	3	3	3.25
5	Home garden AF practices	2	2	2	4	3	2	2	2	2.37
6	Inorganic fertilizer application	1	1	1	1	1	1	1	1	1

Figure 14: Ranking of SAI practices by women from the dry lowland agro-ecological zone.

Table 13: Ranking of indicators of successful agriculture by men from the dry lowland agro-ecological zone

No	Prioritized SAI practice	Ranks						average
1	Compost preparation & utilization	2	5	2	3	5	3	3.33
2	Home garden AF	3	2	4	4	3	6	3.66
3	Crop diversification	6	3	6	2	4	5	4.33
4	Intercropping	1	6	5	1	1	2	2.66
5	Crop rotation	5	4	3	5	2	1	3.33
6	Seedling production and planting	4	1	1	6	6	4	3.66

Figure 15: Ranking of indicators of successful agriculture by men from the dry lowland agro-ecological zone.

4.4. Objective 4. Identifying 'root causes' for highly prioritized SAI practices

Following ranking of SAI practices, the list participants were regrouped into two groups (women FGD and Men FGD) then facilitated to identify one of the barriers to the implementation of the highest ranked SAI practice. The identified root cause analysis is presented below.

Table 12: women group exercise on root cause analysis of home garden agroforestry

SAI practice	Barriers	Root cause
Home garden AF practices	Shortage of improved seed and seedling access	Absence of direct seed supplier
		Poor market linkage
	Disease and pest infestation	Lack of knowledge on management practices
		Wild animal interference
	Minimum technical support	Capacity gap on selected high value crops
	Water shortage	Absence of water harvesting and supplementary irrigation technologies

Figure 16: Women group exercise on root cause analysis of home garden agroforestry.

Table 13: Men group exercise on root cause analysis of soil and water conservation pilot intervention

SAI practice	Barriers	Root cause
Soil and water conservation practices (biophysical measure)	Free gazing	Absence of proper land use policy
		Using Weak by law implantation approach on domestic animal interference
	Poorly managed/ constructed swc measures	Low awareness level of at different level
	Low commitment of experts and development agent	Lack of incentive
		Absence of immediate supervision and follow up

Figure 17: Men group exercise on root cause analysis of soil and water conservation pilot intervention.

4.5. Objective 5. Identifying farmers willing to trial the SAI options on their farms

General discussion was held on selected SAI practice root cause analysis. Following the discussion, a list of volunteer farmer and their respective pilot intervention were recorded as follows:

Table 145: List of volunteer farmers.

No	Name	Sex	District	Kebele	Pilot to be test as 1st priority	Mobile
1	Atalelech Damelay	F	Adami tulu	01	Seedling production	0920087554
2	Chaltu lame	F	Lume	Ejersa	Home stead AF	0920047064
3	Damee Birtu	F	Lume	Ejersa	Home stead AF	0920047064
4	Fanose Balayneh	F	Lume	Ejersa	Home stead AF	0922284930
5	Basalfua Tafase	F	Adami tulu	01	Seedling production	0940218658
6	Lakach shale	F	Adami tult	01	Seedling production	0916339722
7	Robe Odaa	F	Bora	Berta sami	Home stead AF	0931134532
8	Shewaye asafa	F	Bora	Berta sami	Home stead AF	0924057150
9	Guhi badaso	F	Bora	Berta sami	Home stead AF	0962004856
10	Shayite Damamau	F	Adami tulu	01	Seedling production	09200086129
11	Momina Jule	F	Admitulu	Garbi midaane	Home stead AF	0983497933
12	Abebe Diresa	M	Lume	Ejersa Jiroo	Seedling production and compost	0912813710
13	Roba Shumi	M	Lume	Ejersa Jiroo	Homestead AF and SWC	0913121931
14	Jimma Biru	M	Lume	Ejersa Jiroo	Homestead AF and SWC	0912257251
15	Efaa Bira	M	Bora	Berta sami	Homestead AF and compost	0915797353
16	Tufa Korjo	M	Bora	Berta sami	Homestead AF and compost	0921687415
17	Jimma Edee	M	Bora	Berta sami	Homestead AF and compost	0911922927

18	Kabeto Wajiro	M	Adami tulu	Ejersa	Crop diversification	0924353078
19	Adushe uyee	M	Adami tulu	Ejersa Jiroo	Homestead AF	0964811059
20	Ambesa Kinfe	M	Adami tulu	Ejersa Jiroo	Homestead AF	0916841966
21	Jimma Tunna	M	Adami tulu	Ejersa Jiroo	Seedling production	0927293649
22	Alemu edaso	M	Adami tulu	Ejersa Jiroo	Homestead AF	0940345578
23	Tklemariam Sime	M	Dugda	Jewe bofo	Compost and crop diversification	0919576853

5. Closing remarks

The workshop ended with the final closing remark given by Ato Diriba, He forwarded his gratitude to the participants for their active participation and contribution. The trials will begin in the next cropping season and the project will contact them about the upcoming project activity.

6. Appendix 1: Workshop agenda

No	Local Time	Activity	Responsible
1	2:30 – 3:00	Registration	Facilitator
2	3:00 – 3:30	Welcome and Introduction of Participants General overview about workshop objective and methodology	Invited Guest from Adami tuiu woreda Agriculture office Hadia & Diriba
3	3:30 – 4:00	Exercise 1 Vision mapping	Group of Participant
4	4:00 – 4:20	Tea Break	Organizer
5	4 :20 – 4:50	Exercise 2 Success indicator identification	Group of Participant
6	4:50 _ 6:00	Exercise 3 prioritizing SAI pilot intervention	Group of Participant
7	6:00 – 6:30	Discussion	Hadia & Diriba
8	6 :30 – 7:30	Lunch	Organizer
9	7:30 – 8:00	Exercise 4 Barrier root cause analysis	Group of Participant
10	8:00 – 8:45	Exercise 5 Target farmer selection	Group of Participant
11	8:45 – 9:00	Tea Break	Organizer
12	9:00 - 9 :20	General Discussion	Hadia & Diriba
13	9:20 – 10:00	Closing and Group Photo	Partner organization

7. Appendix 2: Workshop Participant attendance sheets

Attendance Sheet for Participants, SAIRLA Farmer's workshop on Feb 27,2017 in Ziway

S/N	Name	Sex	Bureau / organization	Position	Mobile no	Signature
1	Teklemariam sime	M	Ziway model former	Farmer	0919576853	
2	Husın Urginsta	M	A/9ullwu wanala	Agricul office	091038278s	
3	Jima Junnea	M	A/Tulluu Wuaradea	3amay RRC Farmer	0927293648	
4	Hogi Ogoto	M	A/Tulluu Woorala	Agricultural office	0311864905	
5	Gintagebu Shiferaw	M	Bora Agri	Ex. P. Owner	09134783	
6	Jimo Idoe	M	Bora Farmer	Farmer	0911922909	
7	Tufa Corjo	M	Bora(B/Sami)	Farmer	0921687416	Tu Foro
8	Ifaa Bira	M	" "	"	0915797338	
9	Roboo Oddaa	F	" "	"	—	
10	Guchi Badhaoso	F	" "	"	—	
11	Shauaye Asafa	F	" "	"	092405715O	TPP
12	Anbeseo Kinte	M	Adami tulu district	Farmer.	0916841966	
13	Momina Jula	F	Adami tulu district	Farmer	0987497935	
14	Kabeto Wajro	M	Adani tuluudistrict	Former	0922753078	
15	Besulfuwa Tafese	F	Bafi	RRC	0940218618	

Attending the whole Session will be Mandatory   "let's Learn Together"

Attendance Sheet for Participants, SAIRLA Farmer's workshop on Feb 27,2017 in Ziway

S/N	Name	Sex	Bureau / organization	Position	Mobile no	Signature
1	Alapech Seka	F	Batu District	Ziway RRC	0916359721	
2	Haleech Denele	F	Batu District	Ziway RRC	0920087554	
3	Shaite Deno	F	Batu District	Ziway RRC	0980086129	
4	Dema Biratu	F	Mojo District	Farmer	0920047764	8%
5	Chattu Leama	F	Mojo District	Famer	0920047769	
6	Roba Shumii	M	Mojo District	Farmer	0913121931	
7	Girma Abate	M	Mojo District	B/B IIG/Wag. Somu	0923722842	
8	Fantiso Balaynel	F	Mojo District	Farmer.	0822284830	
9	Jime Beru	M	Mojo District	Farmer	0912257251	
10	Abee Dire	M	Mojo District	Former.	0912813710	
11	Alamuu Edaasoo	M	A/Tulu	Former	0940845578	
12	Abushe Guye	M	A/Tulu	Former	0964311053	
13	Lemi Mekonnen	M	Bora	V/AGriculture	0924559209	
14	Diriba Niguaie	M	AA-CEEFRE	Research Co-ord	0911162899	
15	Hadia Seid	F	ICRAF - ENIDIA	Research Ass.	0913283880	

Attending the whole Session will be Mandatory   "let's Learn Together"

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