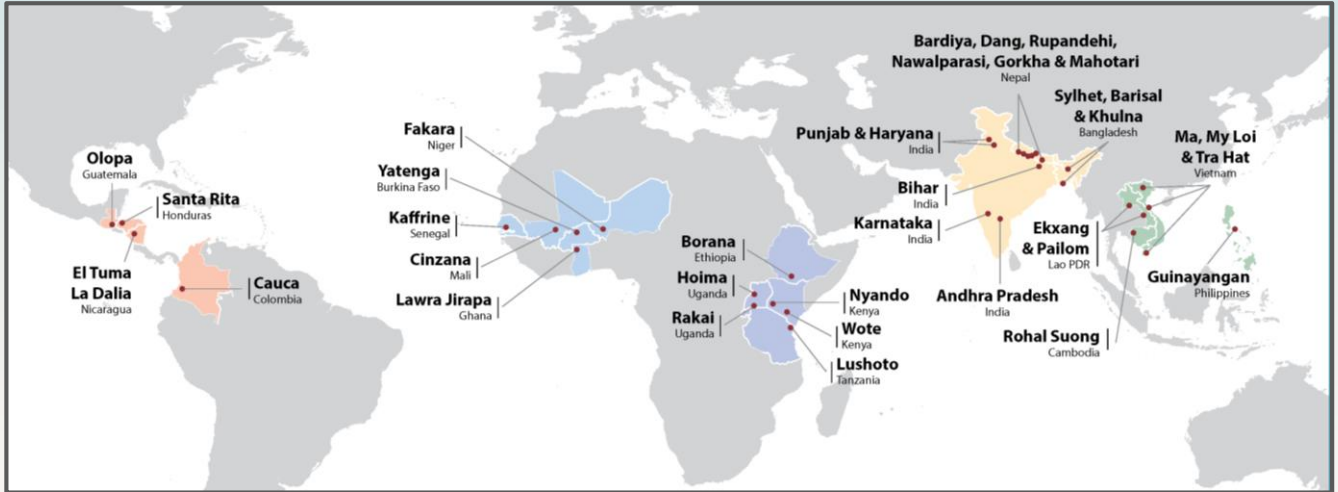




CSA options Implemented and Evaluated across the CCAFS Climate-Smart Villages AR4D sites: 2016 Global Inventory



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Location of the Climate-Smart Villages AR4D sites across the five focal CCAFS regions

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CCAFS Climate-Smart Villages AR4D sites location

Region	Country	CSV AR4D sites	Latitude (Centroide)	Longitude (Centroide)	Closer admin unit
EA	Kenya	Nyando	-0.27	35.07	Nyando, Kisumu and Kericho county, Western Kenya
		Wote	-1.81	37.72	Makueni county, Eastern Kenya
	Uganda	Hoima	1.54	31.55	Hoima district , Western Region
		Rakai	-0.62	31.48	Rakai district, Central Region
	Ethiopia	Borana**	4.96	38.57	Yabello district, Oromia Region
	Tanzania	Lushoto	-4.79	38.42	Lushoto district, Tanga Region
WA	Burkina Faso	Yatenga	13.83	-2.11	Yatenga province, Namissiguima Department and Loroum province, Titao Department
	Ghana	Lawra-Jirapa	10.74	-2.62	Lawra and Jirapa districts, Upper West region.
	Mali	Cinzana	13.51	-5.61	Cinzana commune, Ségou region
	Niger	Fakara	13.65	2.83	Fakara commune, Kollo region
	Senegal	Kaffrine	14.24	-15.41	Kaffrine commune in the Kaffrine Region
SA	Bangladesh	Barisal	22.59	90.02	Pirojpur and Jhalokhati Districts, Division of Barisal
		Sylhet	25.07	91.41	Sylhet district, Division of Sylhet
		Khulna	22.51	89.86	Bagerhat and Satkhira districts, Division of Khulna
	India	Haryana	29.8	76.94	Karnal district, Haryana State
		Bihar	25.76	85.34	Vaishali and Samastipur districts, Bihar state
		Punjab	30.82	76.05	Sangrur district, Punjab state
		<u>Andra Pradesh¹¹*</u>	14.69	77.59	Kumool and Anantapur districts, Andra Pradesh state
		Karnataka*	16.83	75.71	Bijapur district, Karnataka state
		Rupandehi	27.54	83.45	Rupandehi district, Province No.5
	Nepal	Mahotari	26.88	85.81	Mahotari district , Province No.2
		Nawalparasi	27.61	84	Nawalparasi district, Province No. 4
		Dang	27.97	82.41	Dang district, Province No.5
		Bardiya	28.37	81.41	Bardiya district, Province No.5
		Gorkha	27.818	84.74	Gorkha district , Province No. 4
SEA	Vietnam	Ma	21.78	105.05	Vinh Kiên Commune, Yen Binh district (Yen Bai province) and Yen Son district (Tuyen Quang province)
		My Loi	18	106.16	Ky Anh district (Ha Tinh Province)
		Tra Hat	9.37	105.67	Hoa Binh and Vinh Loi districts (Bac Lieu province) and Thanh Tri district (Soc Trang province)
	Lao PDR	Ekxang	18.35	102.46	Viengkham and Phonhong Districts (Vientiane Province)
		Pailom	16.54	105.13	Champhone district (Savannakhet Province)
	Cambodia	Rohal Suong	13.18	103.25	Aek Phnum and Sangkae districts (Battambang province)
	Philippines	Guinayangan	13.9	122.45	Guinayangan municipality (Quezon province)
LAM	Colombia	Cauca	2.57	-76.62	Popayan municipality, Cauca department
	Honduras	Santa Rita	14.99	-89.2	Santa Rita municipality (Copan department)
	Guatemala	Olopa	14.75	-89.41	Olopa municipality (Chiquimula department)
	Nicaragua	El Tuma la Dalia	13.01	-85.68	El Tuma-la Dalia municipality (Matagalpa department)

CCAFS Climate-Smart Villages AR4D sites characteristics



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East Africa

Country	CSV AR4D sites	Closer admin unit	Altitude (m.a.s.l)	Farm size (Ha)	Total HH	Women headed HH	Crops	Animals
Kenya	Nyando	Nyando, Kisumu and Kericho county, Western Kenya	1100-2500	1 – 5	467	64%	Beans, Maize, Green grams, Pigeon pea, Cowpeas, Sweet Potatoes, Sorghum, Finger millet, Tomatoes, Kales, Cassava, Bananas.	Goat, Cow Fish, Chicken
	Wote	Makueni county, Eastern Kenya	900 - 1000	1 – 5	276	66%	Beans, Maize, Sorghum, Green grams, Cowpea, Pearl millet, Pigeon peas	Goat, Cow, Poultry
Uganda	Hoima	Hoima district, Western Region	620 - 1600	1 – 5	989	22%	Maize, Beans, Cassava, Sweet Potatoes, Coffee, Finger Millet, Sorghum, Banana	Cows, Sheep, Goats, Pigs, Poultry
	Rakai	Rakai district, Central Region	620-1600	1 – 5	675	19%	Maize, Banana, Cassava, Sweet Potatoes, Ground nuts, Beans, Finger millet, Sorghum, Mangos	Cows, Goats, Pigs, Poultry
Ethiopia	Borana**	Yabello district, Oromia Region	1000 - 2000	0.5	671	24%	N.A	N.A
Tanzania	Lushoto	Lushoto district, Tanga Region	900 - 2250	0.1– 1	3315	22%	Beans, Cassava, Maize, Irish Potato, Sweet potatoes, Cabbages, Tomatoes, Fruits	Cow, Chicken

West Africa

Burkina Faso	Yatenga	Yatenga province, Namissiguima Department and Loroum province, Titao Department	325	3	367*	2%	Millet, Cowpea, Sorghum, Maize, Sesame, Onion	Goat, Chicken, Cow/Oxen, Sheep, Donkey
Ghana	Lawra-Jirapa	Lawra and Jirapa districts, Upper West region.	180 - 300	3	344*	4%	Millet, Sorghum, Maize, Yam, Cowpea, Groundnut	Chicken, Guinea fowls, Goat, Sheep, Cow
Mali	Cinzana	Cinzana commune, Ségou region	300	9	305*	1%	Millet, Sorghum, Peanut, Maize, Cowpea, Rice	Goat, Chicken, Sheep, Oxen, Donkey
Niger	Fakara	Fakara commune, Kollo region	200	10	254*	4%	Millet, Cowpea, Sorghum, Maize, Peanut	Goat, Chicken, Sheep, Cow/Oxen
Senegal	Kaffrine	Kaffrine commune in the Kaffrine Region	15 - 20	9	406*	2%	Millet, Sorghum, Peanut, Maize	Horse, Donkey, Dairy Cow, Goat, Sheep

Latin America

Colombia	Cauca	Popayan municipality, Cauca department	1760	2 – 5	1491	9%	Coffee, Sugar cane, Beans, Vegetables	Pigs, Hen
Honduras	Santa Rita	Santa Rita municipality (Copan department)	660	1 – 5	479	15%	Coffee, Cocoa, Maize, Beans	Turkeys, Pigs
Guatemala	Olopa	Olopa municipality (Chiquimula department)	1585	<1	555	13%	Coffee, Cocoa, Maize, Beans	Banana, Pigs
Nicaragua	El Tuma la Dalia	El Tuma-la Dalia municipality (Matagalpa department)	900	1 – 5	613	17%	Coffee, Cocoa, Beans, Maize	Pigs

South Asia

Bangladesh	Barisal	Pirojpur and Jhalokhati Districts, Division of Barisal	11	<1	2400	8%	Rice, Pulses, Sweet gourd, Bitter gorud, Brinjal	Poultry, Tilapia, Carp, Catfish, Cow, Goat
	Sylhet	Sylhet district, Division of Sylhet	3	<1	143*	5%	Rice, Wheat, Bean, Pulses, Betel leaf, Pine apple	Poultry, Cat fish, Carp, Cow, Goat, Buffalo
	Khulna	Bagerhat and Satkhira districts, Division of Khulna	7	0.5	1250	5%	Rice, Wheat, Chili, Brinjal, Cucumber, Cauliflower	Poultry, Cow, Tilapia, Magur, Carp, Goat
India	Haryana	Karnal district, Haryana State	230 – 285	2.5	>1000	3%	Rice, Wheat, Maize, Mustard, Pulses	Cow, Buffalo
	Bihar	Vaishali and Samastipur districts, Bihar state	39-66	0.4	>1000	1%	Rice, Wheat, Maize, Potatoes, Oil crops, vegetables	Cow, Goat, Buffalo, Chicken
Nepal	Punjab	Sangrur district, Punjab state	230 – 430	2.5	>500	N.A	Rice, Wheat, Maize, Mustard, Pulses	Buffalo, Cow, Goat, Fish
	Mahotari	Mahotari district, Province No.2	300-1000	0.4	555	44%	Rice, Wheat, Maize, Potato, Mustard, Pigeon pea, Seasonal vegetable, Pulses	Buffalo, Cow, Goat, Chicken
	Nawalparasi	Nawalparasi district, Province No. 4	300 - 1000	0.58	646	47%	Rice, Wheat, Maize, Potato, Pigeon pea, Lentil, Seasonal vegetables, Pulses	Buffalo, Ox, Goat, Chicken
	Dang	Dang district, Province No.5	213- 2058	0.5	1076	45%	Rice, Wheat, Maize, Potato, Mustard, Pigeon pea, Lentil, Seasonal vegetables	Buffalo, Cow, Goat, Ox, Chicken
	Bardiya	Bardiya district, Province No.5	138 - 1279	0.5	677	45%	Rice, Wheat, Lentil, Potato, Mustard, Pigeon Pea, Seasonal Vegetables	Buffalo, Cow, Goat, Chicken, Ox
Gorkha	Gorkha district, Province No. 4	300 - 5000	0.4	191	72%	Maize, Cowpea, Rice, Tomato, Mustard, Seasonal Vegetables	Buffalo, Cow, Goat, Chicken	

CCAFS Climate-Smart Villages AR4D sites characteristics



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South East Asia

Country	CSV AR4D sites	Closer admin unit	Altitude (m.a.s.l.)	Farm size (Ha)	Total HH	Women headed HH	Crops	Animals
Vietnam	Ma	Vinh Kiên Commune, Yen Binh district (Yen Bai province) and Yen Son district (Tuyen Quang province)	40	1 – 5	192	26.5% *	Rice, Maize, Cassava, Vegetables, Pomelo, Fruit trees, Forest trees	Goat, Cow, Chicken, Pig
	My Loi	Ky Anh district (Ha Tinh Province)	60	1 – 2	213	17% *	Rice, Peanut, Sweet potato, Cassava, Green bean, Maize, Vegetables, Orange, Citrus, Accasia, Eucalyptus, Tea, Pepper	Chicken, Pig, Cow, Goat
	Tra Hat	Hoa Binh and Vinh Loi districts (Bac Lieu province) and Thanh Tri district (Soc Trang province)	1	1 – 5	264	22%	Rice, Vegetables	Chicken, Duck, Pig, Python, Frog
Lao PDR	Ekxang	Viengkham and Phonhong Districts (Vientiane Province)	175	1 – 5	216	9%	Rice, Maize, Cassava, Beans, Vegetables, Fruits, Forest trees	Pig, Chicken, Ducks, Fish, Cow
	Pailom	Champhone district (Savannakhet Province)	150	1 – 5	102	8.8% *	Rice, Maize, Vegetables, Forest trees	Pig, Chicken, Ducks, Cow
Cambodia	Rohal Suong	Aek Phnum and Sangkae districts (Battambang province)	15	< 1	300	20%	Rice, Maize, Soybean, Sweet potato, vegetables, Corchorus, Fruit trees	Natural fish, Pig, Chicken
Philippines	Guinayangan	Guinayangan municipality (Quezon province)	10-180	2.5	2162	Not available	Rice, Maize, Groundnut, Coconut	Goat, Carabao, Chicken



Top 10 CSA Practices Implemented and Evaluated across the CCAFS AR4D Climate-Smart Villages in 2016

Practices Total: 55 With mitigation potential: **24**

Implemented & Evaluated : **31**

Gender impact assessed for **24**

Implemented only: **20** Evaluated only: **4**

Potential gender impact known for **35**

Top 10 CSA Practices	# CSV sites	Region (country)	Implem.	Eval.	Impl. & Eval	Gender Assessed	Potential gender impacts
Improved Varieties	27	* LAM (Colombia, Honduras, Guatemala, Nicaragua) * EA (Kenya, Tanzania, Uganda) * SA (Bangladesh, India, Nepal) * SEA (Cambodia, Lao PDR, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	-	-	x	x	x
Intercropping	18	* EA (Kenya, Tanzania, Uganda) * SA (India, Nepal) * SEA (Philippines, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger)	-	-	x	x	x
Intercropping (Tree Planting)	12	* EA (Kenya, Uganda, Tanzania) * SEA (Cambodia, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	-	-	x	x	x
Organic Fertilizer	12	* LAM (Colombia, Honduras, Guatemala, Nicaragua) * SA (Nepal) * SEA (Philippines, Vietnam) * WA (Burkina Faso, Ghana, Niger)	-	-	x	x	x
Crop Residue retention/ incorporation	10	* LAM (Colombia) * SA (India) * SEA (Cambodia, Philippines)	-	-	x	x	x
No/Reduced Tillage	9	* SA (India, Nepal) * WA (Ghana, Senegal)	-	-	x	x	x
Water Harvesting	9	* LAM (Colombia) * EA (Kenya, Tanzania, Uganda) * WA (Burkina Faso, Ghana, Mali, Niger) * SA (Nepal) * SEA (Lao PDR)	-	-	x	-	x
Mulching	7	* SA (Bangladesh, India, Nepal) * SEA (Philippines) * WA (Ghana)	-	-	x	x	x
Integrated Nutrient Management	6	* SA (India, Nepal) * WA (Burkina Faso, Ghana, Senegal)	-	-	x	x	x
Irrigation	6	* LAM (Colombia) * SA (India, Nepal) * SEA (Cambodia, Lao PDR)	-	-	x	x	x
Raised beds	6	* SA (Bangladesh, India, Nepal)	-	-	x	x	x
Crop Rotation	5	* SA (India, Nepal) * WA (Ghana)	-	-	x	x	x
Inorganic Fertilizer	5	* SA (Nepal) * WA (Senegal)	-	-	x	x	x
Rice Management (Direct seeded)	5	* SA (India, Nepal) * SEA (Philippines)	-	-	x	x	x
Solar based irrigation	5	* SA (India, Nepal)	-	-	x	x	x
Conservation Agriculture	4	* SA (India, Nepal)	-	-	x	x	x
Green Manure	4	* SA (India) * SEA (Philippines, Vietnam)	-	-	x	x	x
Farmer Managed Natural Regeneration - Gral	3	* WA (Burkina Faso, Niger, Senegal)	-	-	x	-	x

Bolded = with mitigation potential



24 CSA Practices with mitigation potential Implemented and Evaluated across the CSVs in 2016



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CSA Practice	# of CSV sites	Region	Region (country)	Implem.	Eval.	Impl. & Eval	Gender Assesse d	Potential gender impacts
Agroforestry Fallows	1	SA	* SA (India)	-	-	x	x	x
BioChar	3	SEA	* SEA (Vietnam)	-	x	-	-	x
Conservation Agriculture	4	SA	* SA (India, Nepal)	-	-	x	x	x
Crop Residue retention/ incorporation	10	LAM,SEA,SA	* LAM (Colombia)* SA (India)* SEA (Cambodia, Philippines)	-	-	x	x	x
Farmer Managed Natural Regeneration - Fodder Shrubs	3	WA	* WA (Burkina Faso, Niger, Senegal)	-	-	x	-	x
	2	SA, SEA	* SA (Bangladesh), * SEA (Philippines)	-	-	x	x	x
Green Manure	4	SA,SEA	* SA (India)* SEA (Philippines, Vietnam)	-	-	x	x	x
Improved Breeds (Small Ruminants)	2	EA,SEA	* EA (Kenya) * SEA (Philippines)	-	-	x	x	x
Improved Cookstoves	3	SEA	SEA (Vietnam)	x	-	-	-	x
Improved Fallows	1	SA	* SA (Nepal)	x	-	-	-	-
Integrated Nutrient Mngt	6	SA, WA	* SA (India, Nepal)* WA (Burkina Faso, Ghana, Senegal)	-	-	x	x	x
Integrated Nutrient Mngt (Greenseeker)	2	SA	* SA (India)	-	-	x	x	x
Integrated Nutrient Mngt (Microdosing)	1	WA	* WA (Mali)	-	-	x	-	-
Intercropping (Tree Planting)	12	EA,SEA,WA	* EA (Kenya, Uganda, Tanzania) * SEA (Cambodia, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	-	-	x	x	x
Mulching	7	SA, SEA, WA	* SA (Bangladesh, India, Nepal) * SEA (Philippines) * WA (Ghana)	-	-	x	x	x
Mutli-strata	1	LAM	* LAM (Colombia)	x	-	-	-	-
No/Reduced Tillage	9	SA, WA	* SA (India, Nepal) * WA (Ghana, Senegal)	-	-	x	x	x
Prunings applied to crops	1	LAM	* LAM (Honduras)	x	-	-	-	-
Rice Mngt (Direct seeded)	5	SA,SEA	* SA (India, Nepal)* SEA (Philippines)	-	-	x	x	x
Rice Mngt (Residue mnagt)	1	SEA	* SEA (Cambodia), SA (Nepal)	x	-	-	-	x
Rice Management (AWD)	2	SA	* SA (India, Nepal)	-	-	x	x	-
Rice Management (SRI)	1	SEA	* SEA (Vietnam)	-	-	x	-	x
Solar based irrigation	5	SA	SA (India, Nepal)	-	-	x	x	x
Water saving- Laser land leveling	3	SA	* SA (India)	-	-	x	x	x

CSA AgroMet Services Implemented and Evaluated in the AR4D Climate-Smart Villages in 2016



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Agro-Met Service	Region (Country)	# CSV AR4D sites	Gender Assessed	Potential gender impacts known
Seasonal forecast	* EA (Kenya, Uganda, Tanzania) * LAM (Colombia, Honduras, Guatemala, Nicaragua) * SEA (Cambodia, Lao PDR, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	20	x	x
Weekly/10 day forecast	* SA (India) * SEA (Lao PDR) * WA (Burkina Faso, Ghana, Senegal)	6	x	x
Daily forecast	* SEA (Lao PDR, Vietnam, Cambodia) * WA (Burkina Faso, Ghana, Senegal)	9	-	x
Agroadvisories on fertilizer and pesticide application	* SA (India, Nepal) * SEA (Lao PDR) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	14	x	x
Agroadvisories on varieties applied under the forecasted information	* SEA (Lao PDR, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	9	-	x

Market Services	Region (Countries)	# CSV AR4D Sites	Gender Assessed	Potential gender impacts known
Contract farming	* LAM (Colombia, Guatemala, Nicaragua) * Vietnam (Ma, My Loi)	5	-	-
Insput subsidies	* EA(Kenya, Uganda, Tanzania) * WA (Ghana, Burkina Faso) * SEA (Vietnam, Cambodia) * SA (India, Nepal)	16	x	x
Market information	* WA (Ghana) * SA (Nepal)	4	-	-
Price support	* LAM (Colombia)	1	-	-



CSA Financial Services Implemented and Evaluated in the AR4D Climate-Smart Villages in 2016



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Financial Services	Region (Countries)	# CSV AR4D Sites	Gender Assessed	Potential gender impacts known
Capacity Building/Technical Assistance (by Dev agencies/programs)	* LAM (Honduras) * EA (Kenya, Uganda, Tanzania) * SEA (Vietnam, Lao PDR) * SA (Nepal)	13	X	X
Financial support for solar irrigation	* SA (Nepal)	3	-	X
Government Subsidies	* WA (Burkina Faso) * SEA (Cambodia) * LAM (Honduras)	3	-	X
Individual Bank savings	* LAM (Honduras, Guatemala) * SEA (Vietnam, Lao PDR)	7	-	-
Individual (short term) Bank loans	* LAM (Colombia) * SEA(Vietnam, Lao PDR, Cambodia)	7	-	-
Individual (long term) Bank loans	* SEA(Vietnam, Lao PDR, Cambodia)	6	-	-
Informal individual credits/loans	* WA (Burkina Faso, Ghana) * LAM (Honduras, Guatemala, Nicaragua) * EA (Uganda) * SEA (Vietnam, Lao PDR, Cambodia) * SA (Nepal)	13	X	X
Informal credits	* SA (Nepal)	2	-	-
Informal group loans	* WA (Ghana) * LAM (Guatemala) * EA (Kenya, Uganda, Tanzania) * SA (Nepal)	8	X	X
Informal credits	* SA (Nepal)	2	-	-
Informal saving groups	* WA (Ghana, Mali, Niger, Senegal) * LAM (Colombia) * SEA (Vietnam, Lao PDR, Cambodia)	11	-	-
Value-Chain Finance	* LMA (colombia)	1	-	-
Weather-based insurance	* Wa (ghana) * SA (India)	3	X	X
Promotion of custom Hiring centers	* SA (India)	1	-	-



CSA Practices Implemented and Evaluated across the CCAFS AR4D Climate-Smart Villages in 2016



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Agronomy (1)

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
BioChar	x	* SEA (Vietnam)	3	* Maize, Groundnut, Rice	-	x	-
Conservation Agriculture	x	* SA (India, Nepal)	4	* Wheat, Rice, Maize	-	-	x
Crop Residue retention/ incorporation	x	* LAM (Colombia) * SA (India) * SEA (Cambodia, Philippines)	10	* Coffee, beans, maize * Rice residue management, All crops * Lowland Rice	-	-	x
Crop Rotation	-	* SA (India, Nepal) * WA (Ghana)	5	* Maize, cowpea * Maize and mustard; Maize and mungbean * Wheat, Maize, Vegetables	-	-	x
Dynamic crop calendar (staggered sowing)	-	* SEA (Lao PDR)	1	Rice	x	-	-
Flood Risk Management (Bank cultivation)	-	* SA (Nepal)	1	Vegetables	x	-	-
Flood Risk Management (Vegetable tower)	-	* SA (Bangladesh)	3	* Sweet gourd, bottle gourd, better gourd, green chili, yard longbean, Indian spinach	-	-	x
Green Manure	x	* SA (India) * SEA (Philippines, Vietnam)	4	* Grass and crop residues * Lowland Rice * Moog, Sesbenia	-	-	x
Improved Fallows	x	* SA (Nepal)	1	* Lentil, chickpea	x	-	-
Improved Varieties	-	* LAM (Colombia, Honduras, Guatemala, Nicaragua) * EA (Kenya, Tanzania, Uganda) * SA (Bangladesh, India, Nepal) * SEA (Cambodia, Lao PDR, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	27	* Maize, beans. * Sorghum, pigeon pea, beans, pearl millet, maize, cowpea, green grams, sorghum, finger millet, cassava, sweet potatoes. * Okra, red amaranth, wheat, rice, maize, vegetables, potato * Rice * Maize, cowpea, soybean, sesame, millet, sorghum, fonio, okra, sena obtusifolia	-	-	x
Inorganic Fertilizer	-	* SA (Nepal) * WA (Senegal)	5	* Maize, millet. * Wheat, rice, maize, vegetables.	-	-	x
Integrated Nutrient Management	x	* SA (India, Nepal) * WA (Burkina Faso, Ghana, Senegal)	6	* Rice, wheat, maize * Maize, cowpea, millet	-	-	x
Integrated Nutrient Management (Greenseeker)	x	* SA (India)	2	* Rice, wheat, maize	-	-	x
Integrated Nutrient Management (Microdosing)	x	* WA (Mali)	1	* Sorghum, millet	-	-	x
Integrated Water management (Village scale)	-	* SA (Nepal) * SEA (Cambodia)	2	* Vegetables, fish, cow * Vegetables	x	-	-
Intercropping (Leguminous)	-	* WA (Mali)	1	* Leguminous tree	x	-	-
Intercropping (Tree Planting)	x	* EA (Kenya, Uganda, Tanzania) * SEA (Cambodia, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger, Senegal)	12	* Casuarina, grevilleia; fruit trees, casuarina, grevilleia * Acacia * Magnifera indica, Anacardium occidentale, Tectonagrandis Teak, Moringa oleifera, Adansonia digitata (baobab), Moringa oleifera, Acacia senegal, A. nilotica and Cassia senna, gliricidia sepium, Ziziphus mauritiana, Tamarindus indica, Psidium guajava and Annona muricata	-	-	x
Irrigation	-	* LAM (Colombia) * SA (India, Nepal) * SEA (Cambodia, Lao PDR)	6	* Home gardens * Rice and vegetables * Wheat, rice	-	-	x
Macro/Microcatchments	-	* WA (Burkina Faso)	1		x	-	-
Mulching	x	* SA (Bangladesh, India, Nepal) * SEA (Philippines) * WA (Ghana)	7	* Sweet gourd, bottle gourd, better gourd, green chili, yard longbean, indian spinach, spinach, ginger * Cassava * Yam, vegetables	-	-	x



CSA Practices Implemented and Evaluated across the CCAFS AR4D Climate-Smart Villages in 2016



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Agronomy (2)

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
New cropping system & additional crops (Home gardens)	-	* WA (Ghana, Senegal) * SEA (Vietnam) * SA (Nepal) * LAM (Honduras, Guatemala, Nicaragua, Colombia)	12	* Soybean, vegetables * Water melon, okra, mint and pepper, oranges * Vegetables (for kitchen gardening: summer (bean, cucumber, bitter gourd, bottle gourd, okra, cowpea, pumpkin) ,, winter (cauliflower, cabbage, chilli, tomato) * Vegetables	x	-	-
New cropping system & additional crops (Intercropping)	-	* SEA (Philippines)	1	* Pineapple under Coconut Based Farming system, Corn under coconut based farming system, Peanuts under coconut based farming system, Fruit trees under coconut based farming system	x	-	-
No/Reduced Tillage	x	* SA (India, Nepal) * WA (Ghana, Senegal)	9	*Wheat, rice, Rice hekuli, maize * Maize, soybean, cowpea, millet	-	-	x
Organic Fertilizer	-	* LAM (Colombia, Honduras, Guatemala, Nicaragua) * SA (Nepal) * SEA (Philippines, Vietnam) * WA (Burkina Faso, Ghana, Niger)	12		-	-	x
pH Management	-	* LAM (Honduras)	1	Coffee	x	-	-
Raised beds	-	* SA (Bangladesh, India, Nepal)	6	* Seedling (chili, brinjal) * Maize and mustard * Tomato, cauli and cabbage	-	-	x
Rice Management (Direct seeded rice)	x	* SA (India, Nepal) * SEA (Philippines)	5	* Upland Rice* Rice* Rice	-	-	x
Rice Management (Low external input/ planting distance)	-	* SEA (Philippines)	1	* LEIRP	-	-	x
Rice Management (Residue management)	x	* SEA (Cambodia), SA (Nepal)	1	* Rice	x	-	-
Rice Management Alternate Wetting and Drying (AWD)	x	* SA (India, Nepal)	2	* Rice	-	-	x
Rice Management (SRI)	x	* SEA (Vietnam)	1	* Rice	-	-	x
Water Harvesting	-	* LAM (Colombia) * EA (Kenya, Tanzania, Uganda) * SA (Nepal) * SEA (Lao PDR)	9	* Vegetables * Vegetables and rice * Vegetables	-	-	x
Water Harvesting (Bund)	-	* WA (Niger)	1	* Millet, Sorghum	x	-	-
Water Harvesting (Contour ridging)	-	* WA (Mali)	1		-	-	x
Water Harvesting (Earth bund)	-	* WA (Ghana)	1	* Maize	-	x	-
Water Harvesting (Half moon)	-	* WA (Niger)	1	* Millet, sorghum	x	-	-
Water Harvesting (Planting pits)	-	* WA (Burkina Faso, Ghana, Niger)	3	* Maize * Millet and Cowpea * Sorghum	x	-	-
Water Harvesting (Ties ridges)	-	* WA (Ghana)	1	* Maize	-	x	-
Water saving- Laser land leveling	x	* SA (India)	3	* All crop	-	-	x



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Agroforestry

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
Agroforestry Fallows	x	* SA (India)	1	Wheat, fodder	-	-	x
Farmer Managed Natural Regeneration - Gral	x	* WA (Burkina Faso, Niger, Senegal)	3	* Ziziphus mauritiana, Balanites aegyptiaca, Sclerocarya birrea, Acacia nilotica, Acacia seyal, Piliostigma reticulatum, Adansonia digitata are spared in the field . * Millet, sorghum, Cowpea, peanut, hibiscus. * Maize, millet, groundnut	-	-	x
Intercropping	-	* EA (Kenya, Tanzania, Uganda) * SA (India, Nepal) * SEA (Philippines, Vietnam) * WA (Burkina Faso, Ghana, Mali, Niger)	18	* Sorghum-pigeon pea, beans-maize, sorghum-cowpea, maize-beans, cassava * Maize and potato, mungbean, maize-ginger, maize-cowpea, mustard and lentil, mustard and pea, kidneybean-ginger, rapeseed-lentil. * Cassava-grass-cowpea, maize and peanut * Jathropha, cowpea, millet and cowpea, sorghum, millet, fodder crops (groundnut, cowpea)	-	-	x
Mutli-strata	x	* LAM (Colombia)	1	* Coffee, beans	x	-	-
Pruning		* SEA (Vietnam)	1	* Citrus	x	-	-
Prunings applied to crops	x	* LAM (Honduras)	1	* Coffee	x	-	-

Aquaculture

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
Conservation Aquaculture	-	* SEA (Cambodia)	1	* Natural fish	-	x	-
Farmer Managed Natural Regeneration - Fish	-	* SEA (Cambodia)	1	* Natural fish	x	-	-
Fisheries intensification	-	* SA (Bangladesh)	1	* Indigenous fish	-	-	x
Rice cum fish farming	-	* SA (Nepal)	1	* Rice and fish	x	-	-



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Energy

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
Improved Cookstoves	x	SEA (Vietnam)	3		x	-	-
Solar based irrigation	x	SA (India, Nepal)	5	*Wheat,vegetables	-	-	x

Breed Management

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
Improved Breeds (Pigs)	-	* SEA (Philippines)	1	* Native Pigs	-	-	x
Improved Breeds (Poultry)	-	* WA (Niger, Senegal)	2	* Chicken	x	-	-
Improved Breeds (Small Ruminants)	x	* EA (Kenya)* SEA (Ph	2	*Galla goats, red maasai sheep, * Goat	-	-	x

Livestock

CSA sub-Practice	Mitigation potential	Region (country)	# CSV sites	Related Crop	Implem.	Eval.	Impl. & Eval
Fodder Shrubs	x	* SA (Bangladesh) * SEA (Philippines)	2	* Nepiar, Pari, Jambo grass * Intensive feed garden	-	-	x



CSA AgroMet Services Implemented and Evaluated in the AR4D Climate-Smart Villages in 2016



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Agro-Met Service	Region	Country	CSV AR4D site	Agro-Met Service Implemented	Agro-Met Service Evaluated	Gender Assessed	Potential gender impacts known
Seasonal forecast	WA	Ghana	Lawra-Jirapa	-	x	-	-
		Burkina Faso	Yatenga	-	x	-	-
		Mali	Cinzana	-	-	-	-
		Niger	Fakara	-	-	-	-
		Senegal	Kaffrine	-	x	-	x
	LAM	Colombia	Cauca	-	-	-	-
		Honduras	Santa Rita	-	-	-	-
		Guatemala	Olopa	-	-	-	-
		Nicaragua	El Tuma la Dalia	-	-	-	-
	EA	Kenya	Nyando	-	x	x	x
			Wote	-	x	x	x
		Uganda	Hoima	x	-	x	x
			Rakai	-	-	x	x
	SEA	Vietnam	Ma	-	-	-	-
			My Loi	-	-	-	-
			Tra Hat	-	-	-	-
		Lao PDR	Ekxang	-	-	-	-
Pailom			x	-	-	x	
Cambodia	Rohal Suong	-	-	-	-		
Agroadvisories on fertilizer and pesticide application	LAM	Colombia	Cauca	-	-	-	-
	WA	Ghana	Lawra-Jirapa	-	-	-	-
		Burkina Faso	Yatenga	-	-	-	-
		Mali	Cinzana	-	-	-	-
		Niger	Fakara	-	-	-	-
		Senegal	Kaffrine	-	-	-	-
	SEA	Lao PDR	Pailom	x	-	-	x
	SA	India	Bihar	-	-	-	-
			Haryana	x	x	x	x
			Punjab	x	x	x	-
		Nepal	Nawalparasi	-	-	-	-
			Dang	x	-	-	-
Bardiya	x	-	-	-			
Mahotari	x	-	-	-			
Agroadvisories on varieties applied under the forecasted	WA	Ghana	Lawra-Jirapa	x	-	-	-
		Burkina Faso	Yatenga	x	-	-	-
		Mali	Cinzana	-	-	-	-
		Niger	Fakara	-	-	-	-
		Senegal	Kaffrine	-	x	-	x
	SEA	Vietnam	Ma	-	-	-	-
			My Loi	-	-	-	-
Tra Hat	-		-	-	-		
Lao PDR	Pailom	x	-	-	x		
Weekly/10 day forecast	WA	Ghana	Lawra-Jirapa	-	x	-	-
		Burkina Faso	Yatenga	-	x	-	-
		Senegal	Kaffrine	-	x	-	x
	SEA	Lao PDR	Ekxang	-	-	-	-
	SA	India	Haryana	x	x	x	x
			Punjab	x	x	x	-
	Daily forecast	WA	Ghana	Lawra-Jirapa	-	x	-
Burkina Faso			Yatenga	-	x	-	-
Senegal			Kaffrine	-	x	-	x
SEA		Vietnam	Ma	x	-	-	-
			My Loi	-	-	-	-
			Tra Hat	-	-	-	-
		Lao PDR	Ekxang	-	-	-	-
			Pailom	-	-	-	-
Cambodia	Rohal Suong	-	-	-	-		



Market Incentives available in the AR4D Climate-Smart Villages in 2016



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Market Services	Region	Country	CSV AR4D site	Available	Implemented	Evaluated	# of households	Gender Assessed	Potential gender impacts known
Contract farming	LAM	Colombia	Cauca	X	-	-	-	-	-
		Guatemala	Olopa	X	-	-	-	-	-
		Nicaragua	El Tuma la Dalia	X	-	-	-	-	-
	SEA	Vietnam	Ma	X	-	-	-	-	-
			My Loi	X	-	-	-	-	-
Input subsidies	EA	Kenya	Nyando	-	x	-	2000	x	x
			Wote	x	x	-	2000	x	x
		Uganda	Hoima	x	x	-	2000	x	x
			Rakai	x	-	-	2000	x	X
		Tanzania	Lushoto	x	x	-	3000	x	x
	WA	Ghana	Lawra-Jirapa	X	-	-	-	-	-
		Burkina Faso	Yatenga	X	-	-	-	-	-
	SEA	Vietnam	Tra Hat	X	-	-	-	-	-
		Cambodia	Rohal Suong	X	-	-	-	-	-
	SA	Nepal	Bardiya	X	-	-	-	-	-
			Dang	X	-	-	-	-	-
			Mahotari	X	-	-	-	-	-
			Nawalparasi	X	-	-	-	-	-
			Gorkha	X	-	-	-	-	-
		India	Haryana	X	-	-	-	-	-
		Punjab	X	-	-	-	-	-	
Market information	WA	Ghana	Lawra-Jirapa	X	X	-	641	-	-
	SA	Nepal	Bardiya	X	-	-	-	-	-
			Nawalparasi	X	-	-	-	-	-
			Mahotari	X	-	-	-	-	-
Price support	LAM	Colombia	Cauca	X	-	-	-	-	

CSA Financial Services Implemented and Evaluated in the AR4D Climate-Smart Villages in 2016

Financial Services	Region	Country	CSV AR4D site	Available	Implemented	Evaluated	Gender Assessed	Potential gender impacts known
Capacity Building/Technical Assistance (by Dev agencies/programs)	LAM	Honduras	Santa Rita	X	-	-	-	-
	EA	Kenya	Nyando	-	X	-	X	X
			Wote	X	-	-	X	X
		Uganda	Hoima	-	X	-	X	X
			Rakai	-	X	-	-	X
		Tanzania	Lushoto	X	-	-	-	X
	SEA	Vietnam	Ma	X	-	-	-	-
			My Loi	X	-	-	-	-
			Tra Hat	X	-	-	-	-
	Lao PDR	Ekxang	X	-	-	-	-	
	SA	Nepal	Mahotari	X	X	-	-	-
			Nawalparasi	-	X	-	-	-
			Bardiya	X	X	-	-	-
Mahotari			X	X	-	-	X	
Financial support for solar irrigation	SA	Nepal	Nawalparasi	-	X	-	-	X
			Dang	-	X	-	-	X
			Bardiya	X	-	-	-	-
			Yatenga	X	-	-	-	X
Government Subsidies <i>(during the election period)</i>	WA	Burkina Faso	Yatenga	X	-	-	-	X
	SEA	Cambodia	Rohal Suong	X	-	-	-	-
Individual Bank savings	LAM	Honduras	Santa Rita	X	-	-	-	-
			Guatemala	Olopa	X	-	-	-
	SEA	Vietnam	Ma	X	-	-	-	-
			My Loi	X	-	-	-	-
			Tra Hat	X	-	-	-	-
	Lao PDR	Ekxang	Ekxang	X	-	-	-	-
			Pailom	X	-	-	-	-
Individual (short term) Bank loans	LAM	Colombia	Cauca	X	-	-	-	-
	SEA	Vietnam	Ma	X	-	-	-	-
			My Loi	X	-	-	-	-
			Tra Hat	X	-	-	-	-
	Lao PDR	Ekxang	Ekxang	X	-	-	-	-
			Pailom	X	-	-	-	-
	Cambodia	Rohal Suong	X	-	-	-	-	
Individual (long term) Bank loans	SEA	Vietnam	Ma	X	-	-	-	-
			My Loi	X	-	-	-	-
			Tra Hat	X	-	-	-	-
	Lao PDR	Ekxang	Ekxang	X	-	-	-	-
			Pailom	X	-	-	-	-
	Cambodia	Rohal Suong	X	-	-	-	-	

CSA Financial Services Implemented and Evaluated in the AR4D Climate-Smart Villages in 2016



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Financial Services	Region	Country	CSV AR4D site	Available	Implemented	Evaluated	Gender Assessed	Potential gender impacts known	
Informal individual credits/loans	WA	Ghana	Lawra-Jirapa	X	-	-	-	-	
		Burkina Faso	Yatenga	X	-	-	-	-	
	LAM	Honduras	Santa Rita	X	-	-	-	-	
		Guatemala	Olopa	X	-	-	-	-	
		Nicaragua	El Tuma la Dalia	X	-	-	-	-	
	EA	Uganda	Rakai	X	-	-	X	X	
	SEA	Vietnam	Ma	X	-	-	-	-	
			My Loi	X	-	-	-	-	
			Tra Hat	X	-	-	-	-	
		Lao PDR	Ekxang	X	-	-	-	-	
			Pailom	X	-	-	-	-	
Cambodia		Rohal Suong	X	-	-	-	-		
SA	Nepal	Bardiya	X	-	-	-	-		
Informal credits	SA	Nepal	Mahotari	X	-	-	-	-	
			Nawalparasi	-	X	-	-	-	
Informal group loans	WA	Ghana	Lawra-Jirapa	X	-	-	-	-	
	LAM	Guatemala	Olopa	X	-	-	-	-	
	EA	Kenya	Nyando	-	X	-	X	X	
			Wote	-	X	-	X	X	
		Uganda	Hoima	X	X	-	X	X	
			Rakai	X	-	-	X	X	
	Tanzania	Lushoto	X	X	-	-	X		
SA	Nepal	Bardiya	X	-	-	-	-		
Informal saving groups	WA	Ghana	Lawra-Jirapa	X	-	-	-	-	
		Mali	Cinzana	X	-	-	-	-	
		Niger	Fakara	X	-	-	-	-	
		Senegal	Kaffrine	X	-	-	-	-	
	LAM	Colombia	Cauca	X	-	-	-	-	
			SEA	Vietnam	Ma	X	-	-	-
					My Loi	X	-	-	-
	Tra Hat	X			-	-	-		
	SEA	Lao PDR	Ekxang	X	-	-	-	-	
			Pailom	X	-	-	-	-	
Cambodia			Rohal Suong	X	-	-	-	-	
Value-Chain Finance	LAM	Colombia	Cauca	X	-	-	-		
Weather-based insurance	WA	Ghana	Lawra-Jirapa	X	-	-	-	-	
	SA	India	Haryana	-	X	X	X	X	
Punjab			X	X	X	-	-		
Promotion of custom Hiring centers	SA	India	Bihar	X	-	-	-	-	

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