Latin America Climate-Smart Villages AR4D sites: 2017 Inventory

RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

CGIAR Centers

Implementing partners

Local partners

Asociación de Juntas de Acción Comunal del Noroccidente de Popayán, Cauca.

Citation

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Inventory of CSA practices in Latin America's Climate-Smart Villages

RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

Total practices: **12**

Practices with mitigation potential: **5**

♀ Gender impact assessed for: **4**

♀ Potential gender impact known for: **4**

CSA sub-practice	Mitigation potential	Country	CSV sites	Crop	Tested	Evaluated	# HH[1]	Gender assessed	Potential gender impacts
Crop residue retention	X	Colombia	Cauca	Coffee, Sugar cane	X	X	17	-	-
		Nicaragua	El Tuma La Dalia	Beans, plantains, Vegetables	X	-	28	X	X
Improved varieties (Drought tolerance)	-	Colombia	Cauca	Beans	X	X	15	-	-
		Guatemala	Olopa	Beans	X	-	23	-	-
		Nicaragua	El Tuma La Dalia		X	-	15	-	-
Resilient Home Gardens (+water harvesting)	-	Honduras	Santa Rita	Vegetables	X	-	3	-	-
		Guatemala	Olopa		X	-	23	-	-
		Colombia	Cauca		X	X	52	X	X
	-	Nicaragua	El Tuma La Dalia	Vegetables	X	-	30	-	X
Improved seeds Biofortified	-	Colombia	Cauca	Beans Maize Beans Others	X	X	17	-	- X
Organic fertilizer	-	Colombia	Cauca	Coffee, Beans, Sugar cane, Home gardens	X	X	63	-	-
		Honduras	Santa Rita	Beans, Coffee Maize	X	-	22	-	-
		Nicaragua	El Tuma La Dalia	Others	-	-	2	X	X
Compost		Guatemala	Olopa	Home gardens	X	-	23	-	-

[1] HH: households

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Total practices: **12**

Practices with mitigation potential: **5**

Gender impact assessed for: **4**

Potential gender impact known for: **4**

CSA sub-practice	Mitigation potential	Country	CSV sites	Crop	Tested	Evaluated	# HH[1]	Gender assessed	Potential gender impacts
Mixed legume/ non-legume intercrop	X	Honduras	Santa Rita	Coffee	X	-	34	-	-
Crop rotation (Mixed legume/non-legume)	-	Honduras	Santa Rita	Maize	X	-	5	-	-
Water harvesting (Cisterns and Tanks)	-	Colombia	Cauca	Vegetables Beans	X	-	5	-	-
Irrigation (other)	X	Guatemala	Olopa	Home gardens	X	-	23	-	-
		Colombia	Cauca	Beans, Home gardens	X	-	1	-	-
Agrosilvopastoral systems	X	Nicaragua	El Tuma La Dalia	Livestock Agroforestry	X	-	21	-	X
Boundary Planting (Living fences or hederows)	-	Colombia	Cauca	Agroforestry	X	-	1	-	-
		Nicaragua	El Tuma La Dalia		X	-	19	X	X

[1] HH: households

Inventory of CSA practices in Latin America's Climate-Smart Villages

RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

Market services	Country	CSV sites	Available	Tested	Evaluated	Gender assessed	Potential gender impacts
Contract farming	Colombia	Cauca	X	-	-	-	-
	Guatemala	Olopa	X	-	-	-	-
	Nicaragua	El Tuma La Dalia	X	-	-	-	-
Price support	Colombia	Cauca	X	-	-	-	-

Financial services	Country	CSV sites	Available	Tested	Evaluated	Gender assessed	Potential gender impacts
Capacity building/ Technical	Honduras	Santa Rita	X	-	-	-	-
Government subsidies (during the election period)	Honduras	Santa Rita	X	-	-	-	-
Individual bank savings	Honduras	Santa Rita	X	-	-	-	-
	Guatemala	Olopa	X	-	-	-	-
Individual (short-term) bank loans	Honduras	Santa Rita	X	-	-	-	-
	Guatemala	Olopa	X	-	-	-	-
	Nicaragua	El Tuma La Dalia	X	-	-	-	-
Informal group loans	Guatemala	Olopa	X	-	-	-	-
Informal savings groups	Colombia	Cauca	X	-	-	-	-
Value-Chain finance	Colombia	Cauca	X	-	-	-	-

Contacts

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Acknowledgments
This CSV inventory was implemented as part of CCAFS Flagship 2 activities under the global and regional coordination of Osana Bonilla-Findji and Deissy Martinez-Baron respectively. We would like to acknowledge the valuable support of Ecohabitats Foundation and CATIE, our implementing partners .

Climate-Smart Village Cauca (Colombia)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

1760 m.a.s.l | **1-2 Ha** Farm size | **1491** HH | **9%** Headed HH

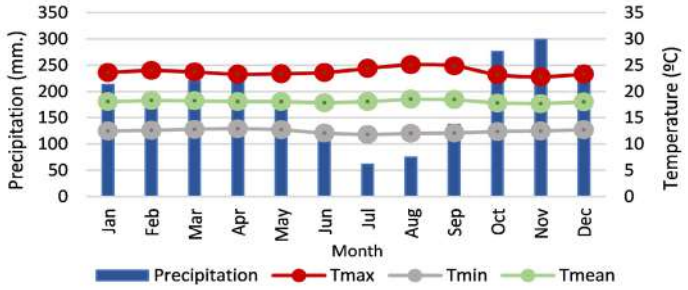
Photo: M. Koningstein (CIAT)

Main crops and livestock

Specific

Food: vegetables ♀
Food/cash: beans, pigs ♀
Cash: coffee, sugar cane, hen ♀

Climatic conditions



Source: www.worldclim.org

	Parameter	Amount	Narrative
	Total annual P	2.256 mm	In a single rainy season of 2.015 mm (Sep-May) and a dry season of 241 mm (Jun-Aug)
	Max # of consecutive dry months	2 months (< 100 mm)	
	Max T rainy season	25ºC	
	Max T dry season	25ºC	
	Highest Tmin	13ºC	April

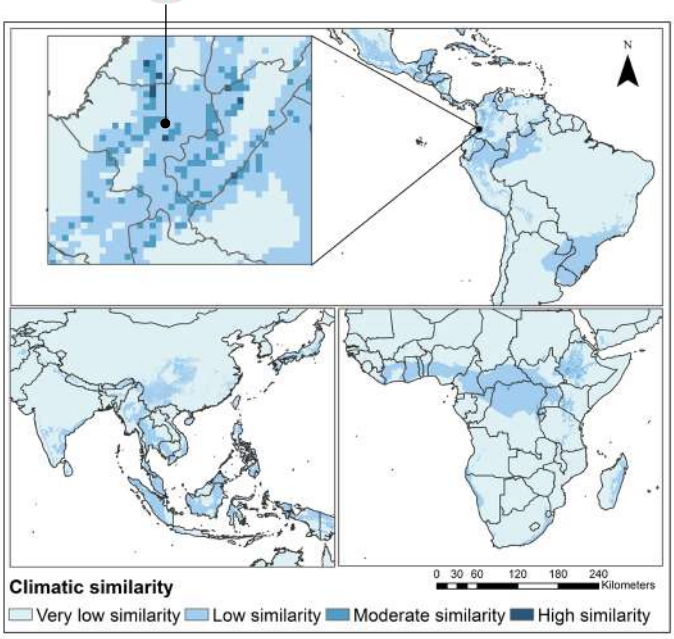
**CCAFS Household, Community and Gender baselines (2014)*

Climate-related risks

Higher temperatures, rainy seasons unstable and erratic, more frequent droughts, increased pest and diseases, erosion, frost and forest fires.

Areas of climatic similarity

Cauca-CSV
2.57ºN 76.62ºW



Areas whose future projected climate (by 2030) is similar to the current climate in this CSV

Source: www.ccafs-analogues.org

Climate-Smart Village Cauca (Colombia)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

1760 m.a.s.l | 1-2 Ha Farm size | 1491 HH | 9% Headed HH

2017: Field testing of CSA portfolio and # of households involved

Tested | Evaluated | Tested & Evaluated | Mitigation potential | Households

Available in Site, not by CCAFS | Gender aspect assessed | Potential gender impact

CSA Practices

- Improved varieties (Drought tolerance) 20
- Crop residue retention 17
- Resilient Home Gardens (+water harvesting) 52
- Improved seeds biofortified 17
- Organic Fertilizer 63
- Water harvesting (cisterns and tanks) 5
- Irrigation (others) 1
- Boundary planting (Living fences or hederows) 1

Agro-climatic services

- Seasonal forecast
- Management recommendations by the National Coffee Federation extension agents

Financial services

- Value chain finance
- Individual - short term bank loans
- Informal savings groups

Market incentives

- Price support
- Contract farming

Flagship projects

- Local to National/Regional synthesis, research and engagement
- Tailored Agro-Climate Services and food security information for better decision making

Partners

CIAT 50 1967-2017 | Fundación EcoHabitats Colombia | CRC | Asociación de Juntas de Acción Comunal del Noroccidente de Popayán, Cauca. | IDEAM

CIAT, Ecohabitats Foundation, Corporación Autonoma Regional del Cauca, UMATA, Universidad del cauca, IDEAM

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CSV profile developed by Osana Bonilla-Findji, Patricia Alvarez-Toro and Julian Ramirez-Villegas

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This work was implemented as part of CCAFS Flagship 2, which is carried out with support from CGIAR Fund Donors and through bilateral funding agreements. For details please visit https://ccafs.cgiar.org/donors.

CCAFS is supported by:

CGIAR | Australian Government Australian Centre for International Agricultural Research | Irish Aid An Roinn Gnóthaí Eachtracha agus Trádála Department of Foreign Affairs and Trade | Ministry of Foreign Affairs of the Netherlands | New Zealand Ministry of Foreign Affairs & Trade Manatū Aorere | Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra Swiss Agency for Development and Cooperation SDC | Department of Agriculture | UKaid from the British people | USAID from the American people | IFAD Investing in rural people

Climate-Smart Village
El tuma la Dalia (Nicaragua)

RESEARCH PROGRAM ON
Climate Change, Agriculture and Food Security

CGIAR

CCAFS

900 m.a.s.l

1-5 Ha Farm size

613 HH

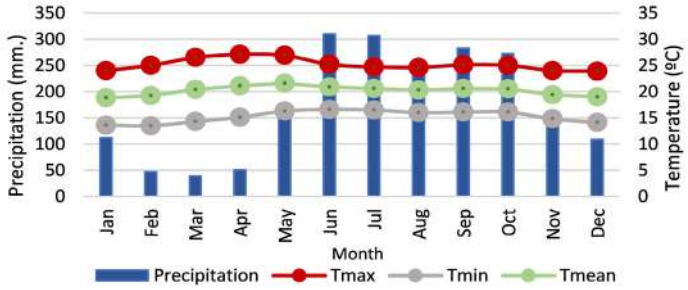
17% Headed HH

Main crops and livestock

Specific

Food: beans, maize, minor species ♀
Food/cash: pigs ♀
Cash: coffee, cocoa

Climatic conditions



Source: www.worldclim.org

	Parameter	Amount	Narrative
	Total annual P	2.105 mm	A single rainy season of 1.599 mm (May – Oct) and a dry season of 506 mm (Jan-Apr, Nov-Dec)
	Max # of consecutive dry months	3 months (< 100 mm)	
	Max T rainy season	26.9ºC	
	Max T dry season	27.1ºC	
	Highest Tmin	16.6ºC	June

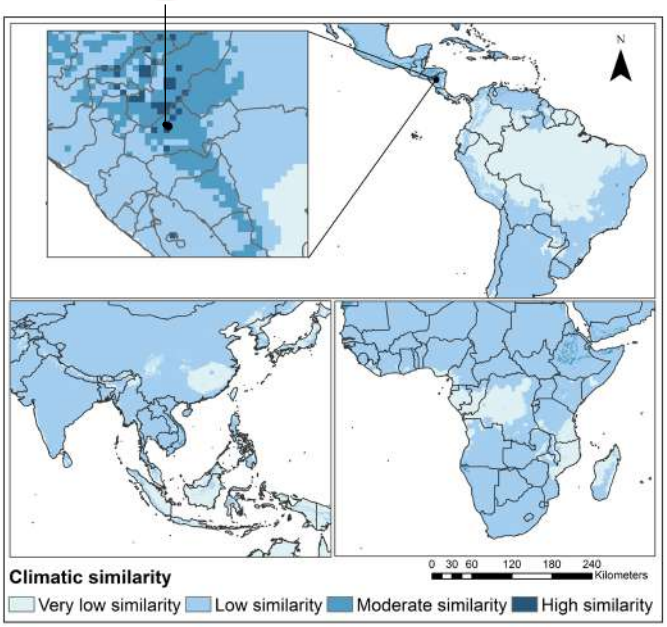
**CCAFS Household, Community and Gender baselines (2014)*

Climate-related risks

Drier summer season and intense canicular period.
Reduction in average monthly rainfall.

Areas of climatic similarity

El Tuma la Dalia-CSV
13.01ºN 85.6ºW



Areas whose future projected climate (by 2030) is similar to the current climate in this CSV

Source: www.ccafs-analogues.org

Climate-Smart Village
El tuma la Dalia (Nicaragua)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

900 m.a.s.l | 1-5 Ha Farm size | 613 HH | 17% Headed HH

2017: Field testing of CSA portfolio and # of households involved

Tested | Evaluated | Tested & Evaluated | Mitigation potential | Households
Available in Site, not by CCAFS | Gender aspect assessed | Potential gender impact

CSA Practices

- Crop residue retention 28
- Resilient Home Garden (+water harvesting) 30
- Improved varieties (drought tolerance) 15
- Organic fertilizer 2
- Agrosilvopastoral systems 21
- Boundary planting (Living fences or hederows 19

Agro-climatic services

- Seasonal forecast

Financial services

- Informal individual credits/ loans

Market incentives

- Contract farming

Flagship projects

- Local to National/Regional synthesis, research and engagement
- Outscaling a citizen science approach to test climate adaptation options on farms
- Tailored Agro-Climate Services and food security information for better decision making

Other projects

- Agricultural systems GHG emission measurements
- Gender roles in agroforestry systems in Tuma La Dalia

Partners

CIAT 50 1967-2017 | CATIE Solutions for environment and development Soluciones para el ambiente y desarrollo | Bioversity International | World Agroforestry Centre

CATIE, CIAT, Bioversity, ICRAF

Other partners
NITLAPAN, Save the Children, Acción Médica Cristiana, ADDAC

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Climate-Smart Village Santa Rita (Honduras)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

660 m.a.s.l | **1-5 Ha** Farm size | **479** HH | **15%** Headed HH

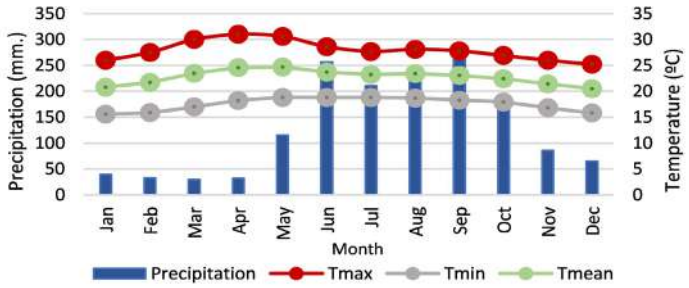

Photo: O.Bonilla (CCAFS)

Main crops and livestock

Specific

Food: maize, beans, small animals ♀
Food/cash: turkeys, pigs ♀
Cash: coffee, cocoa

Climatic conditions



Source: www.worldclim.org

Parameter	Amount	Narrative
Total annual P	1.533 mm	A single rainy season of 1.247 mm (May – Oct) and a dry season of 286 mm (Jan-Apr, Nov-Dec)
Max # of consecutive dry months	6 months (< 100 mm)	
Max T rainy season	30.6ºC	
Max T dry season	31.0ºC	
Highest Tmin	18.8ºC	May, June, July

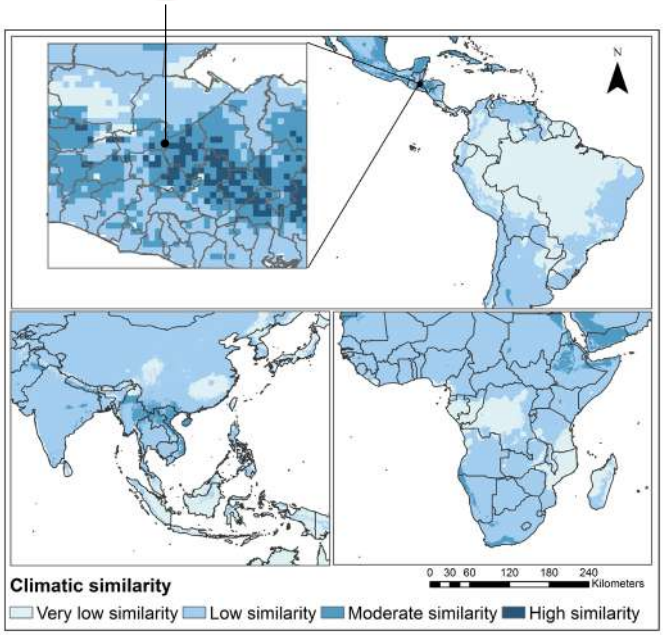
**CCAFS Household baselines (2014)*

Climate-related risks

Higher temperatures, unstable and erratic rainy season, more frequent droughts.

Areas of climatic similarity

El Tuma la Dalia-CSV
14.99ºN -82.9ºW



Areas whose future projected climate (by 2030) is similar to the current climate in this CSV

Source: www.ccafs-analogues.org

Climate-Smart Village Santa Rita (Honduras)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

660 m.a.s.l | 1-5 Ha Farm size | 479 HH | 15% Headed HH

2017: Field testing of CSA portfolio and # of households involved

Tested | Evaluated | Tested & Evaluated | Mitigation potential | Households

Available in Site, not by CCAFS | Gender aspect assessed | Potential gender impact

CSA Practices

- Organic fertilizer 22
- Resilient Home Garden (+water harvesting) 3
- Mixed legume/ non legume inter-crop 34
- Crop rotation Mixed legume/ non legume 5

Agro-climatic services

- Seasonal forecast

Financial services

- Informal individual credits/ loans
- Individual bank savings
- Government subsidies
- Capacity Building-Technical Assistance (Dev. Agencies)

Market incentives

None

Flagship projects

- Local to National/Regional synthesis, research and engagement
- Outscaling a citizen science approach to test climate adaptation options on farms
- Tailored Agro-Climate Services and food security information for better decision making

Partners

CATIE, CIAT, Bioversity, ICRAF, IRI, Columbia University, Mancorsaric, Plan Trifinio Executive Secretariat

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CCAFS is supported by:

Climate-Smart Village Olopa (Guatemala)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

1585 m.a.s.l

<1 Ha Farm size

Maya Ch'ortí **555** HH

13% Headed HH

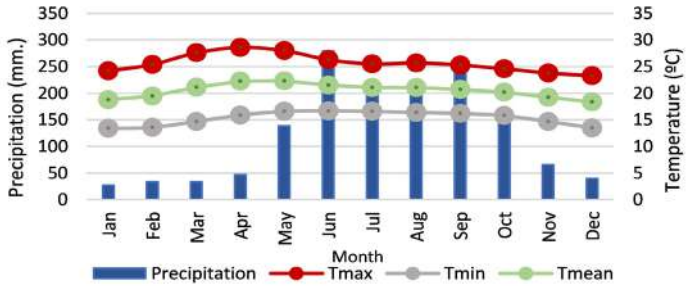
Photo: JL. Urrea (CCAFS)

Main crops and livestock

Specific

Food: maize, beans, small animals ♀
Food/cash: banana, pigs ♀
Cash: coffee, cocoa

Climatic conditions



Source: www.worldclim.org

	Parameter	Amount	Narrative
	Total annual P	1.484 mm	A single rainy season of 1.236 mm (May – Oct) and a dry season of 248 mm (Jan-Apr, Nov-Dec)
	Max # of consecutive dry months	6 months (< 100 mm)	
	Max T rainy season	28ºC	
	Max T dry season	28.6ºC	
	Highest Tmin	16.7ºC	June

**CCAFS Household) baselines (2014)*

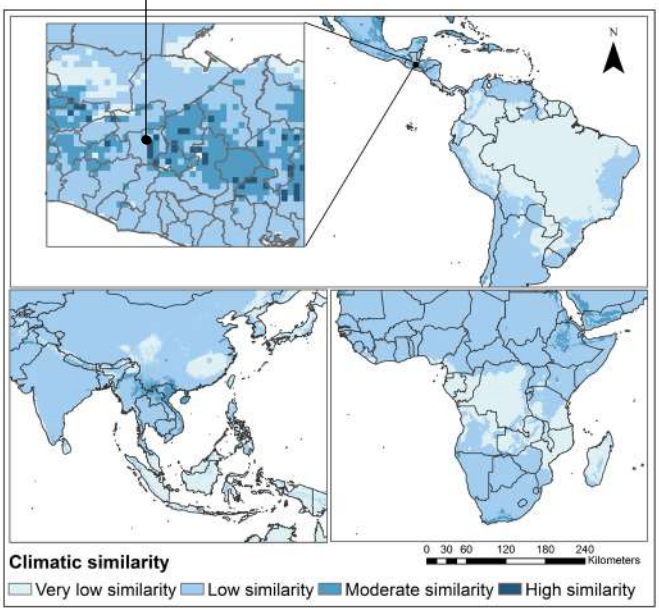
Ethnic group

Climate-related risks

Unpredictable start of rainy season. Drier summer season

Areas of climatic similarity

Olopa-CSV
14.75ºN 89.4ºW



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Source: www.ccafs-analogues.org

Climate-Smart Village Olopa (Guatemala)

RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

1585 m.a.s.l | <1 Ha Farm size | Maya Ch'ortí 555 HH | 13% Headed HH

2017: Field testing of CSA portfolio and # of households involved

Tested | Evaluated | Tested & Evaluated | Mitigation potential | Households

Available in Site, not by CCAFS | Gender aspect assessed | Potential gender impact

CSA Practices

Improved varieties (Drought Tolerance)	23
Compost	23
Irrigation (other)	23
Resilient Home Gardens (+water harvesting)	23

Agro-climatic services

- Seasonal forecast

Financial services

- Informal group loans
- Informal individual credits/loans
- Individual bank savings

Market incentives

- Contract farming

Flagship projects

- Local to National/Regional synthesis, research and engagement
- Tailored Agro-Climate Services and food security information for better decision making

Partners

CATIE, CIAT, Bioversity, Mancomunidad Copan Ch'orti

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