Water Smart Agriculture – a decade successfully restoring soils and revitalizing rainfed agriculture of smallholder farmers in the Central American dry corridor under a changing climate

Axel Schmidt CRS

Soil Partners' Day, Global Soil Partnership , 11th Plenary Assembly, FAO, Rome, Italy

13 July 2023

Agenda

- What is Water Smart Agriculture?
- How did we start?
- Our approach
- Evidence from the field
- Capacity building
- Scaling
- Recent activities
- Final thoughts

Catholic Relief Services (CRS) official agency of the Catholic community in the United States for international humanitarian aid. Offers assistance to people in need in more than 100 countries, regardless of race, religion or nationality.

5.4 million people served by agriculture and livelihoods programs

48 agriculture and livelihood projects in 2022

46 countries

Who We Are

Since 2012 Catholic Relief Services has been implementing the **Water Smart Agriculture / Agua y Suelo para la Agricultura (ASA)** vision to revitalize rain-fed agriculture in Central America and empower smallholder farmers to increase productivity and resilience by better managing soil and water resources.

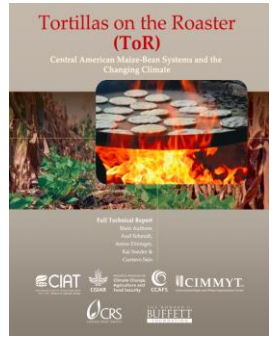
We work with farming communities and agricultural institutions to understand the massive soil and water resource degradation and how to reverse it.

ASA

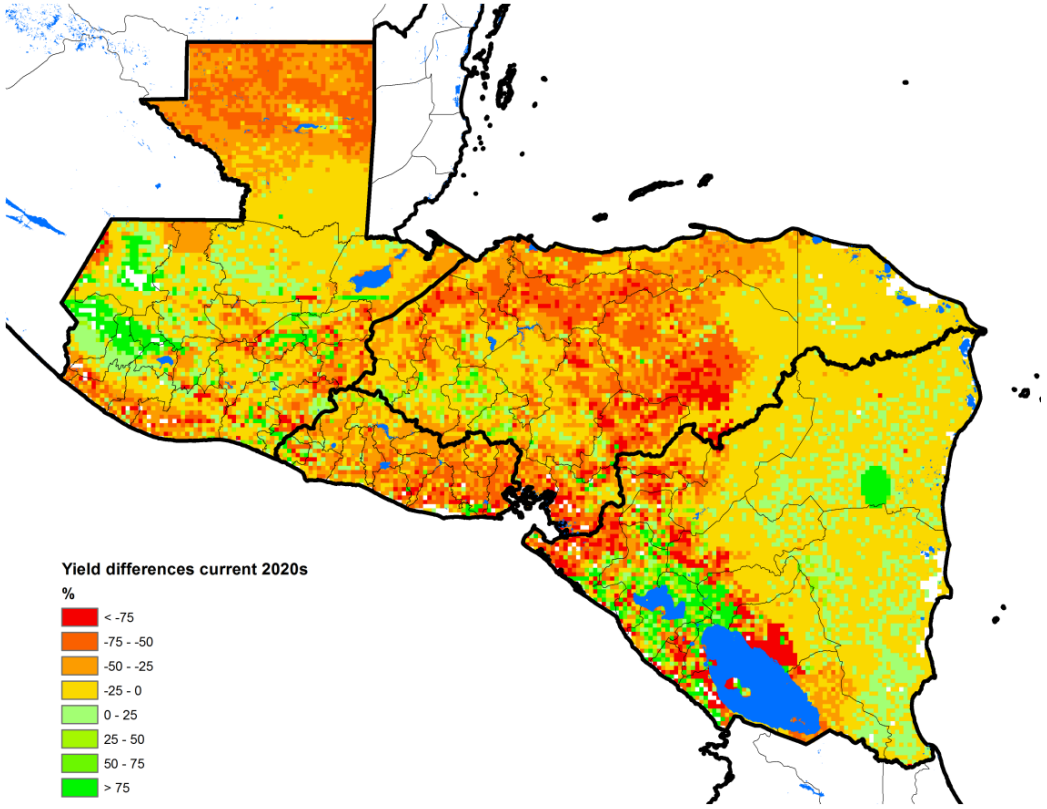
AGUA Y SUELO PARA LA AGRICULTURA

How did we start …?

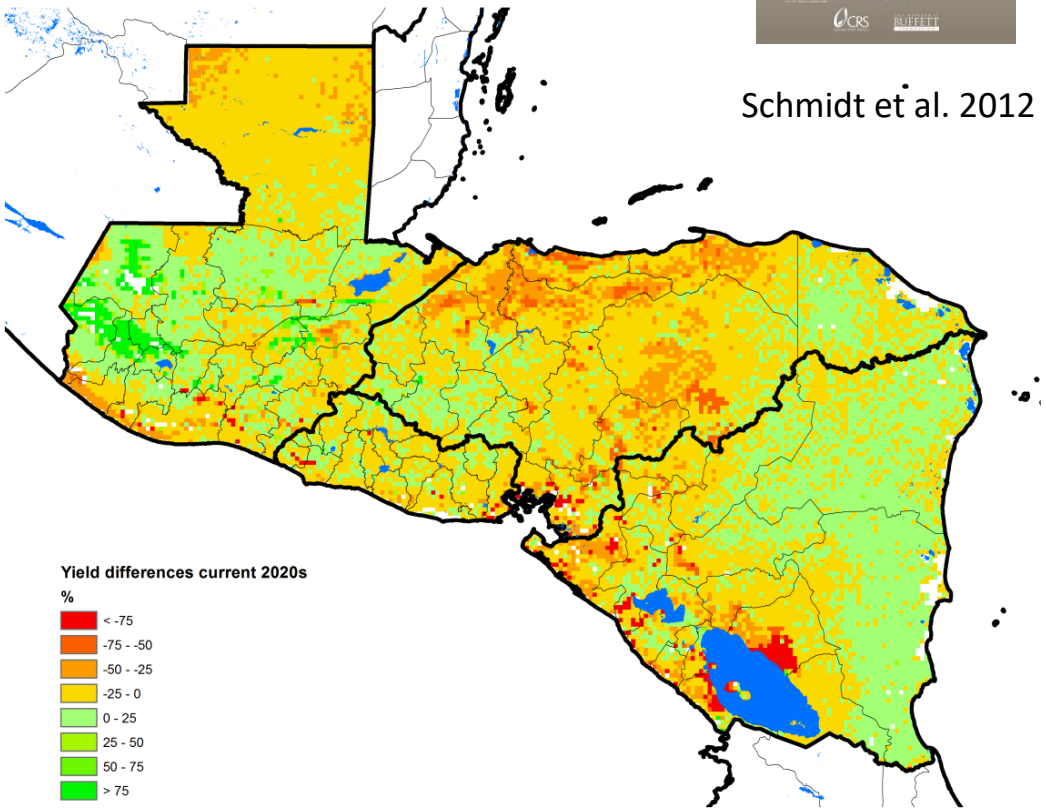
DSSAT simulations revealed ….



Schmidt et al. 2012



Maize yield – " **bad** soil management " (- 2020s)



Maize yield – " **good** soil management " (- 2020s)

CRS /

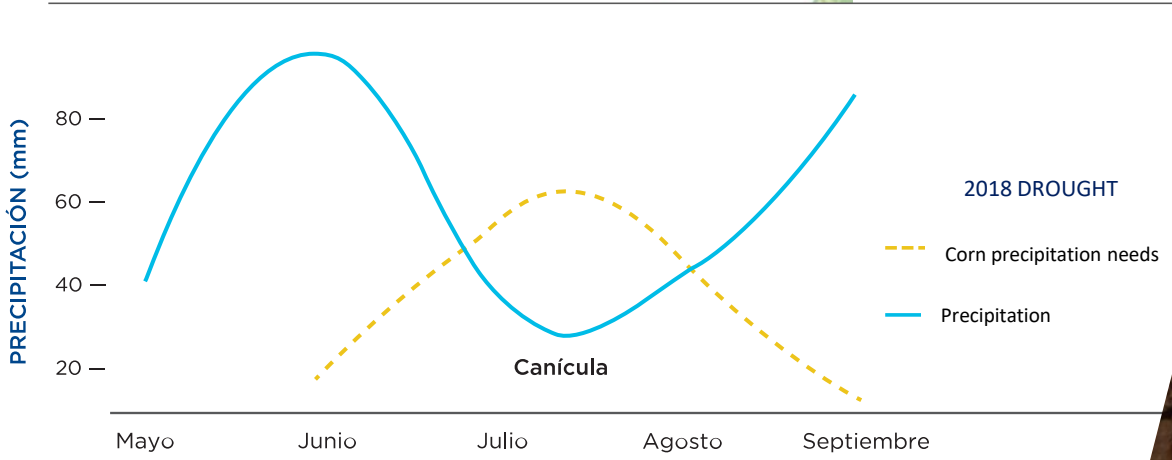
Predicted impacts on maize yields

Country	Degraded Soils		Well managed Soils	
	2020s	2050s	2020s	2050s
	% of variation			
El Salvador	-32.2	-33.5	-1.1	-1.8
Honduras	-29.5	-29.8	-11.7	-11.7
Nicaragua	-11.0	-11.3	-3.3	-4.0
Guatemala	-10.8	-11.0	0.5	0.4

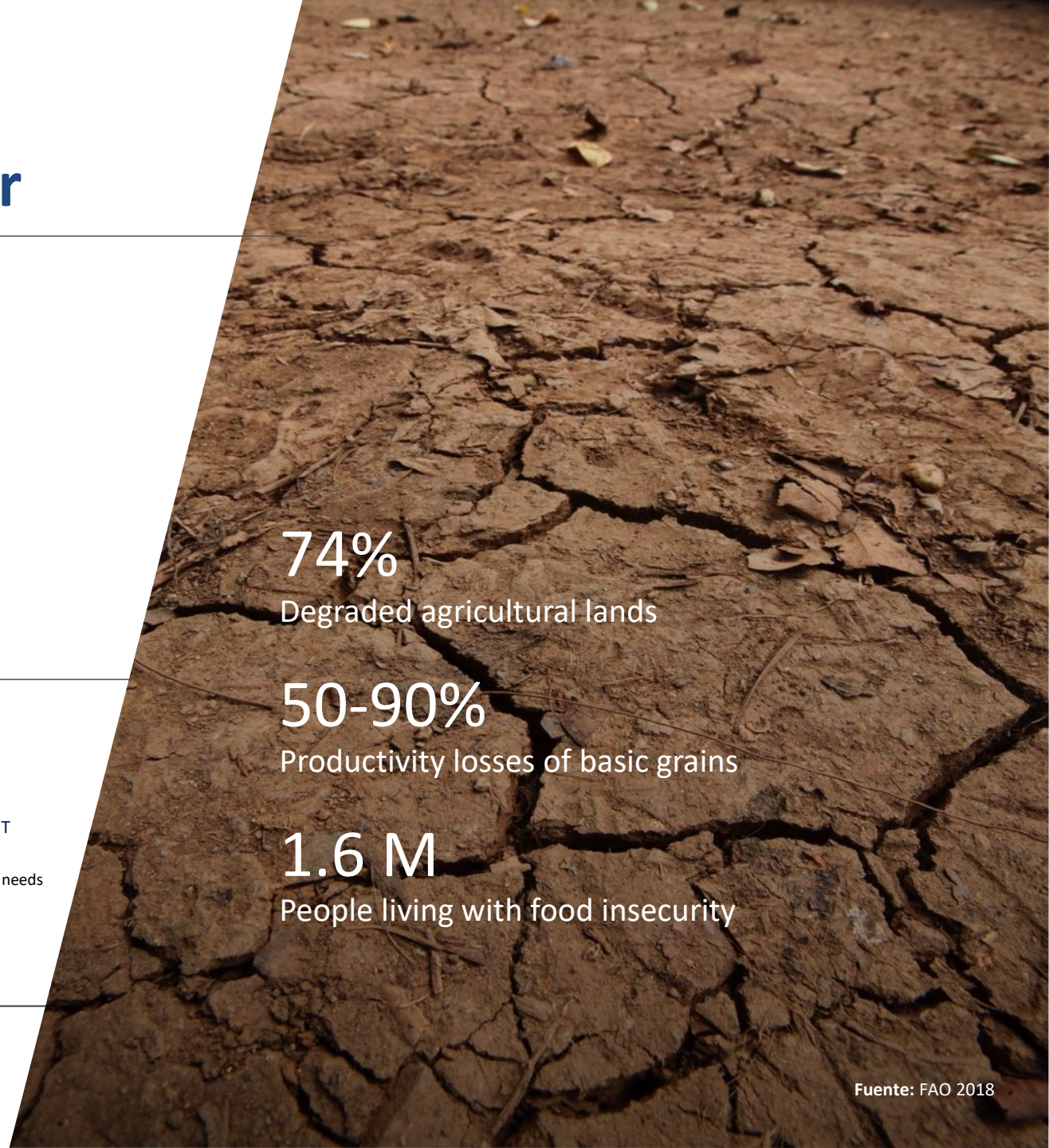
Schmidt et al. 2012

Central America's Dry Corridor

Central America's Dry Corridor



Source: Atlas centroamericano para la gestión sostenible del territorio.



74%
Degraded agricultural lands

50-90%
Productivity losses of basic grains

1.6 M
People living with food insecurity

Fuente: FAO 2018

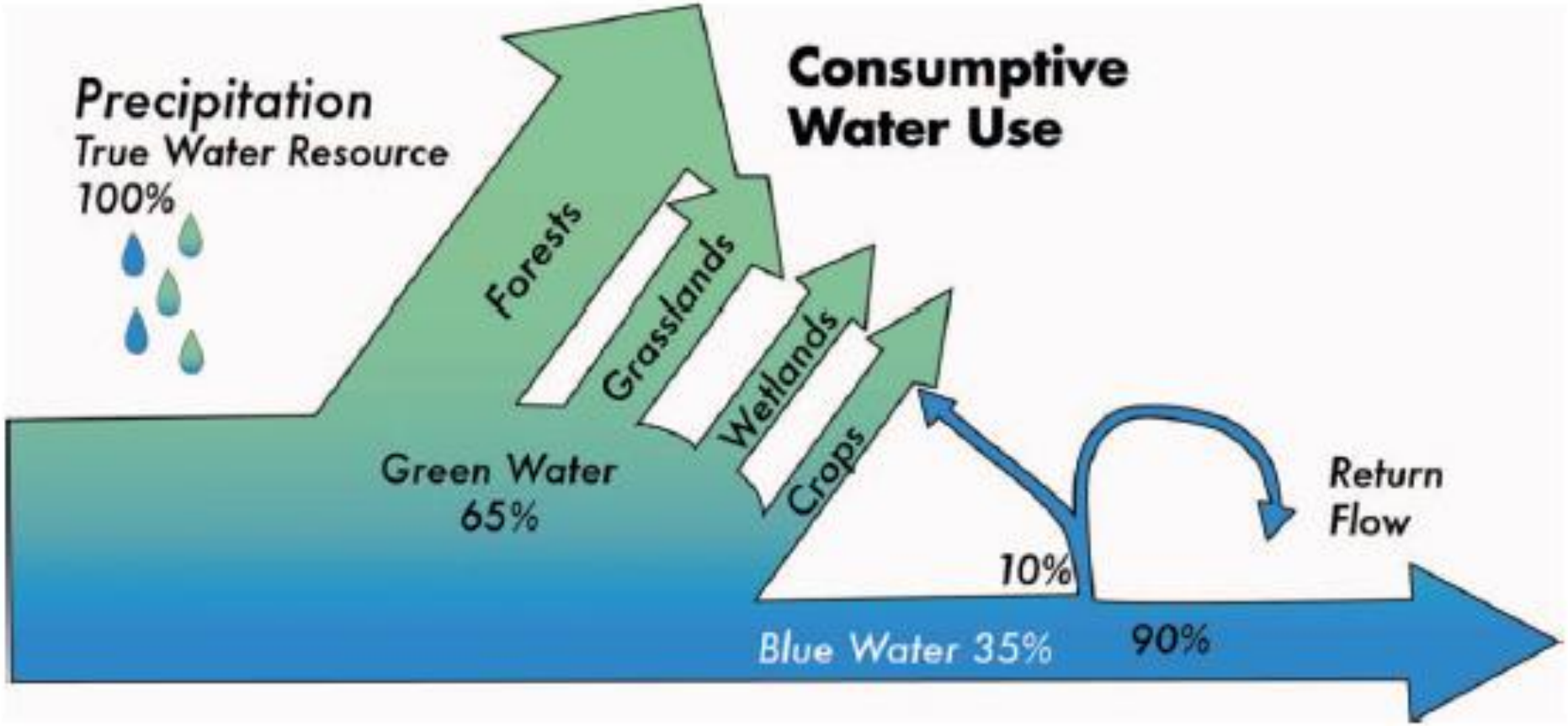
The reality

Addressing soil challenges in Central America

- Information gap about soils
- Limited Human Resources
- Low levels of knowledge about soil
- 74% of the soil in Central America is degraded

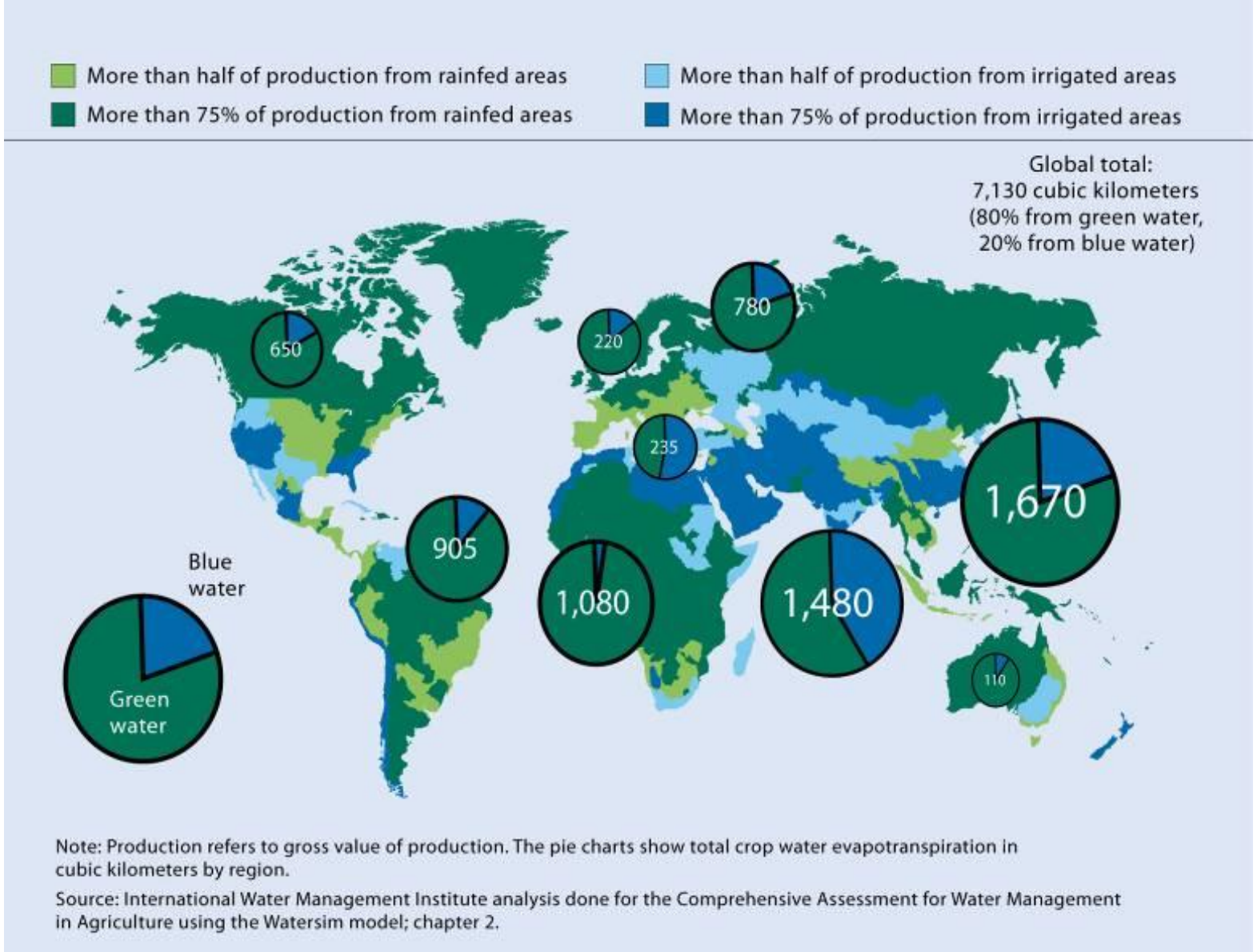
Our approach to sustainable soil & water management

Green water paradigm – rainfed systems



Falkenmark & Rockström, 2010

Upgrade rainfed agriculture



The 20th century was the era of Nitrogen, the 21st century will be the era of Water

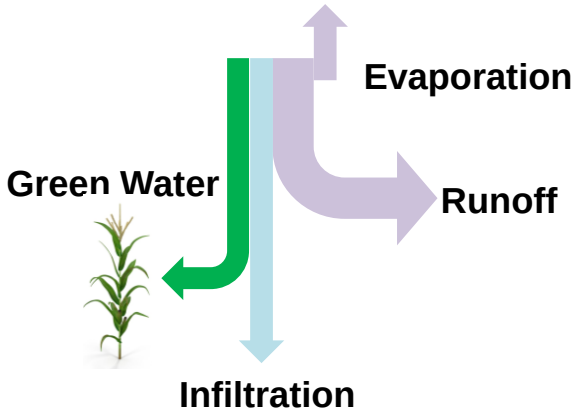
G. Kahnt, University of Hohenheim 1988

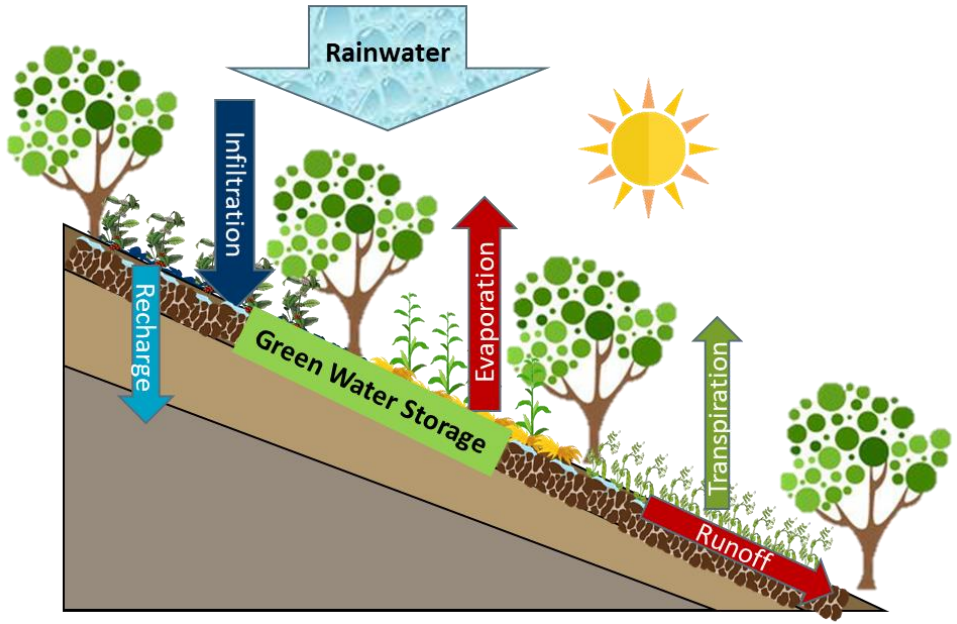
Molden, 2007. Water for Food Water for Life: A Comprehensive Assessment of Water Management in Agriculture

WSA – Manage Soil to Manage Water

Barron, 2012

Poorly-Managed Degraded Soils

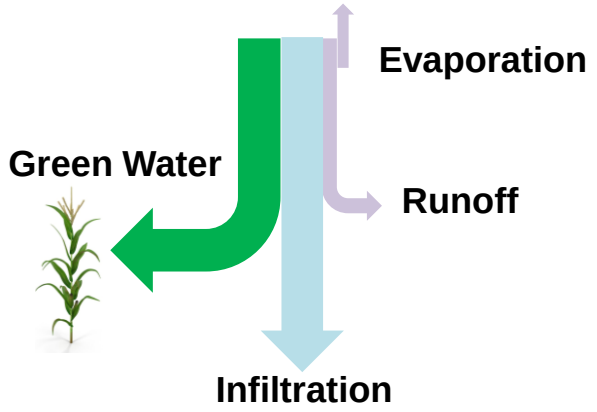




Soil Restoration

- ✓ Minimal Soil Movement
- ✓ Residue Retention/Permanent Soil cover
- ✓ Diversification, Cover Crops, Agroforestry
- ✓ Integrated Soil Fertility Management & 4R

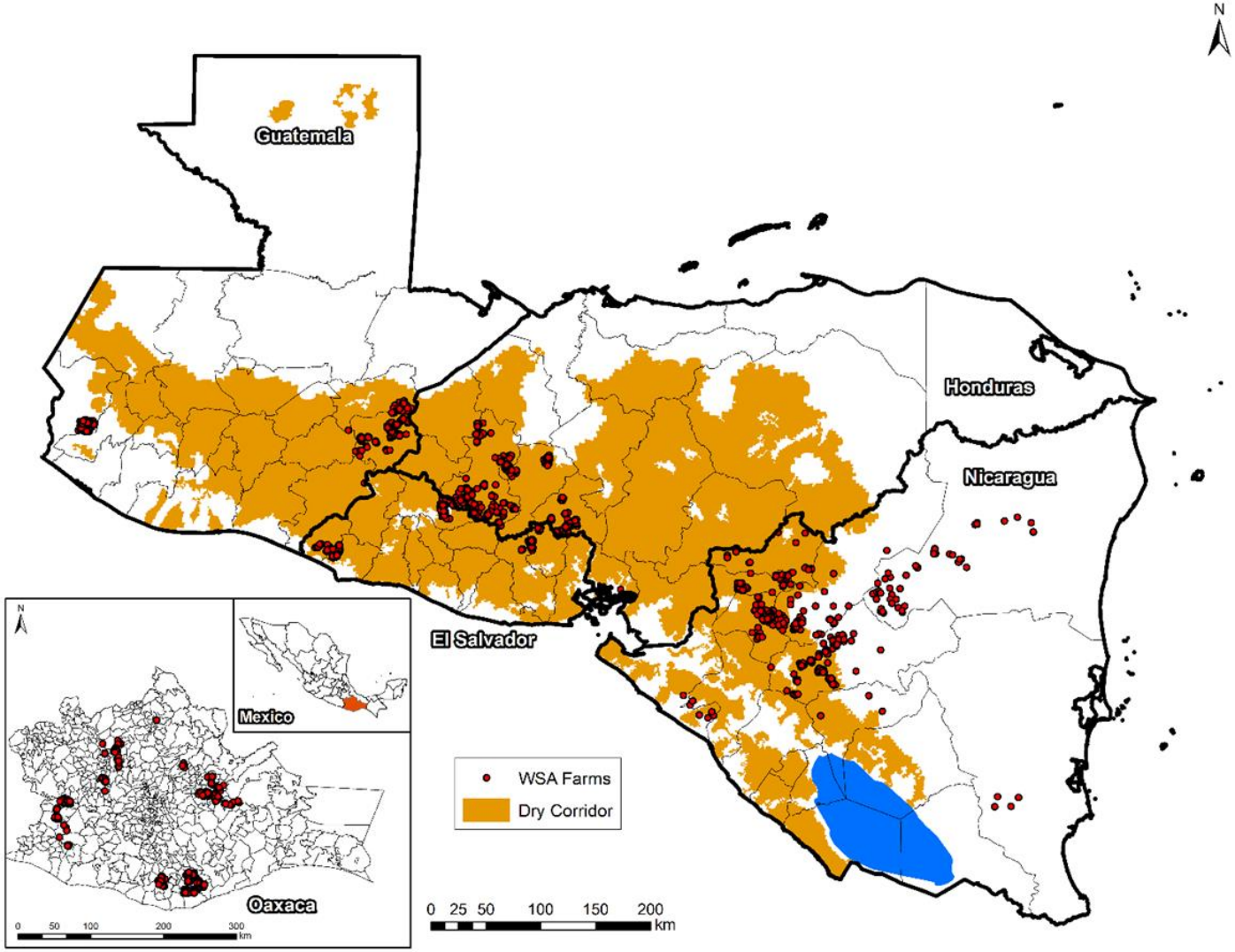
Well-Managed Healthy Soils



CRS

(Falkenmark and Rockstrom, 2010; Foto: Diario La Prensa, 2013; Figura ISRIC 2017)

More than 3000 WSA farms in the region



Collaborative Evidence Building

Side by Side Innovation Plots on > 3,000 farms

Monitoring: Soil moisture, soil health indicators (SOC), productivity, costs and income

- Sequentially build practices
- Adapt solutions to local conditions
- Fill knowledge gaps and promote local innovation

Stepwise Implementation of WSA Practices for Soil Restoration and Productivity

Maize Bean System
- Incorrect Fertilizer use
- Complete Residue removal
- Intensive Tillage
- No trees or hedgerows

Soil Status
- Acidic Soil
- Nutrient Imbalances
- Low SOM
- Low infiltration, water retention

Building trust

+Acidity
+4R Nutrient

Year 1

+Residue Retention
+Cover Crop /Rotation
+Agronomy

Year 2

+Minimum Tillage
+Tree/shrubs
+Alternative Forages

Year 3

- Appropriate variety
- Spacing, Planting date
- Integrated Pest and disease Management

+Tree/shrub management

Year 4

+Agroforest-crop-livestock system management

Year 5

Soil Health Restoration

WSA/ASA - an integrated approach

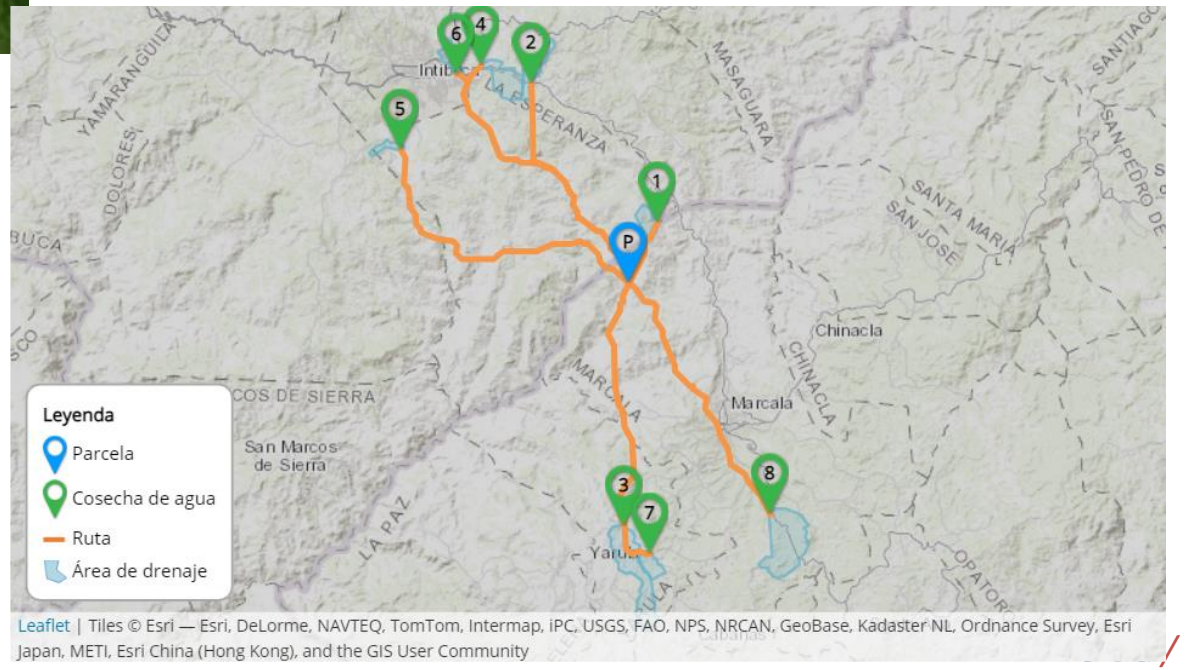
- Based on conservation agriculture principles
- Draws on Integrated Soil Fertility Management (ISFM) & 4R
- Values classical agronomy
- …

Classical agronomy – living roots

WSA/ASA - an integrated approach

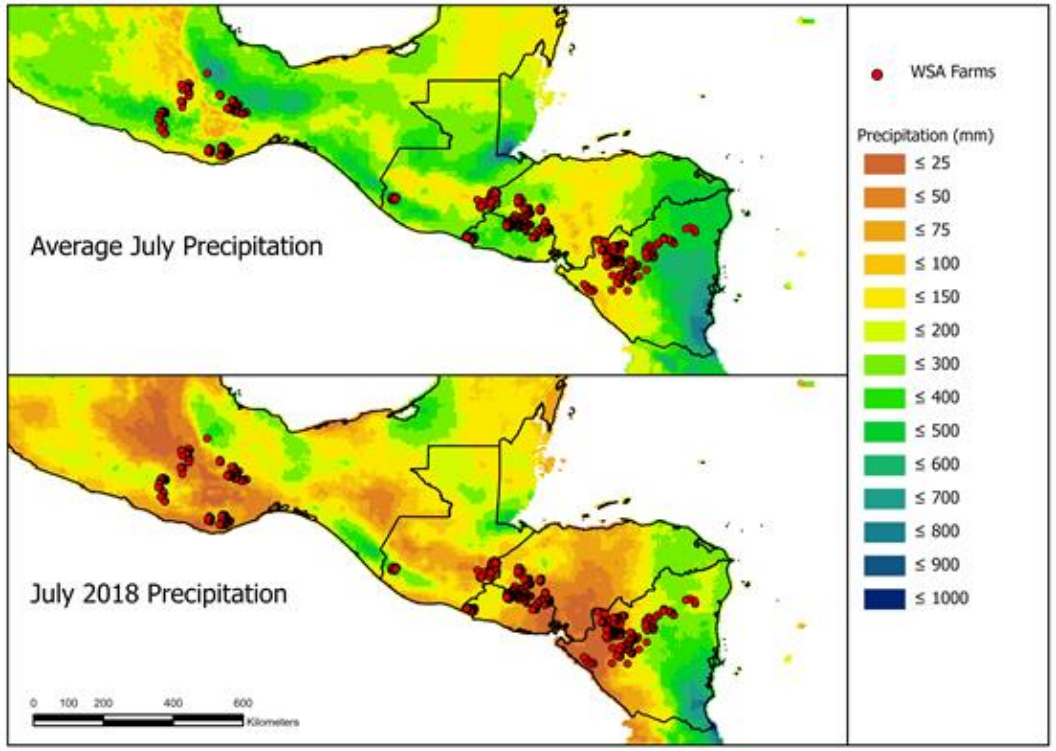
- Based on conservation agriculture principles
- Draws on Integrated Soil Fertility Management (ISFM) & 4R
- Values classical agronomy
- Capitalizing on agroforest-crop-livestock system benefits
- Site-specific
- Knowledge-intensive approach for decision making
- Collaborative Experimentation & Continuous Learning Approach
- Builds on a competency framework

Water harvesting – efficient irrigation - markets

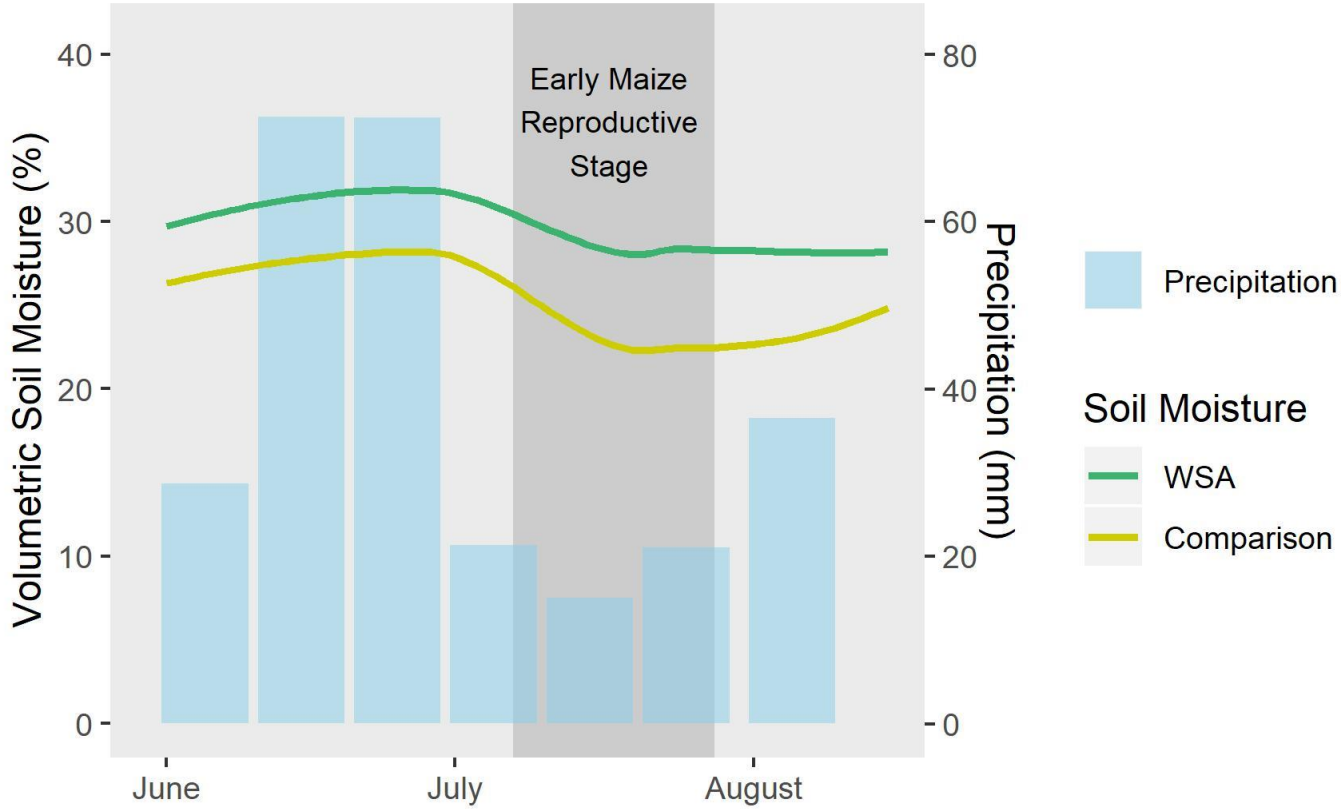


Building Evidence

WSA Increases Soil Moisture and Drought Resilience



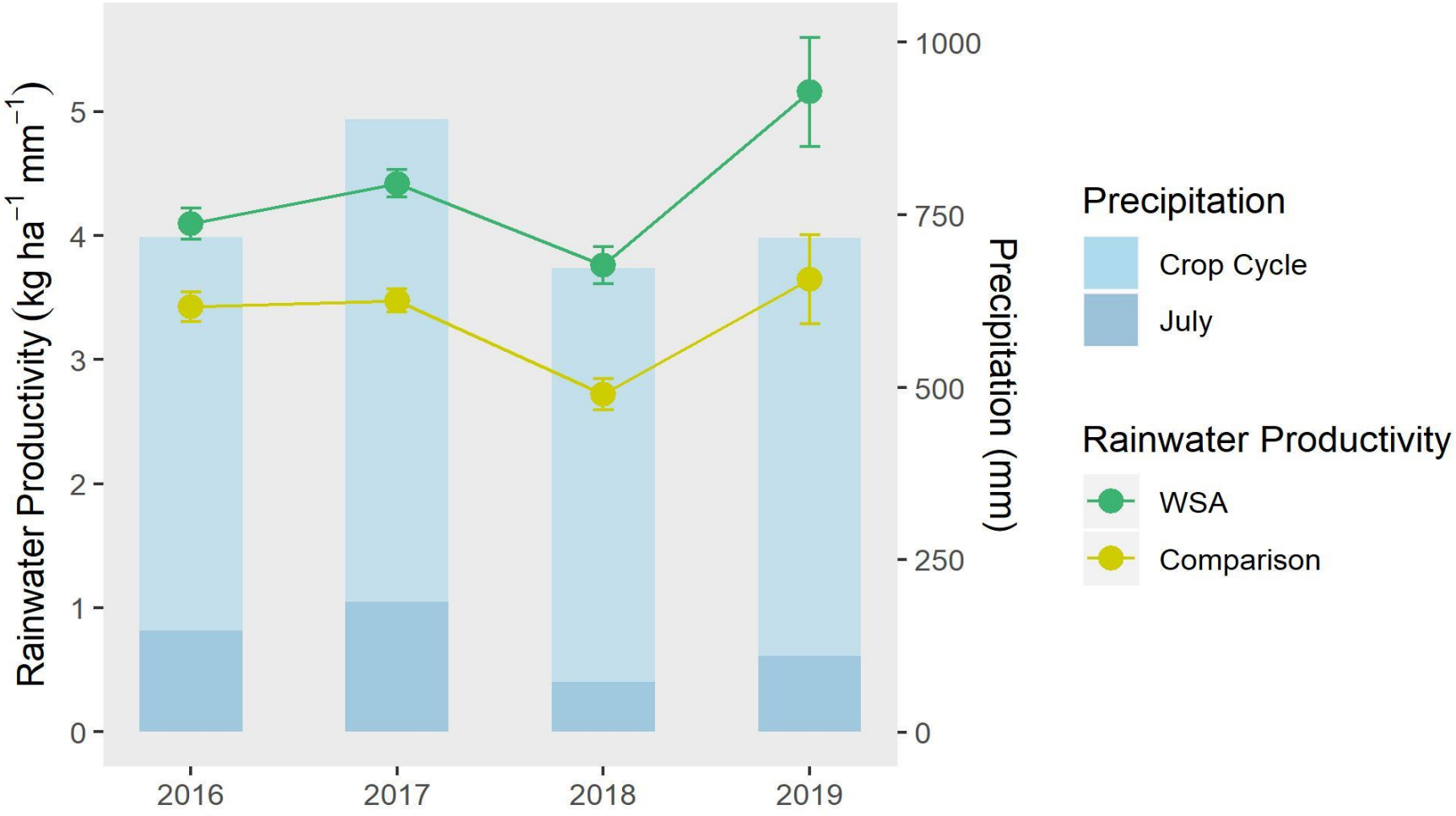
(CHIRPS precipitation data; Funk et al. 2014



Average increase in volumetric soil moisture (%) in WSA plots vs. comparison plots, during the 2018 Primera season in Nicaragua (N=44 farms). The average 2018 precipitation in the plots is shown by the blue bars and the early reproductive stage is indicated.

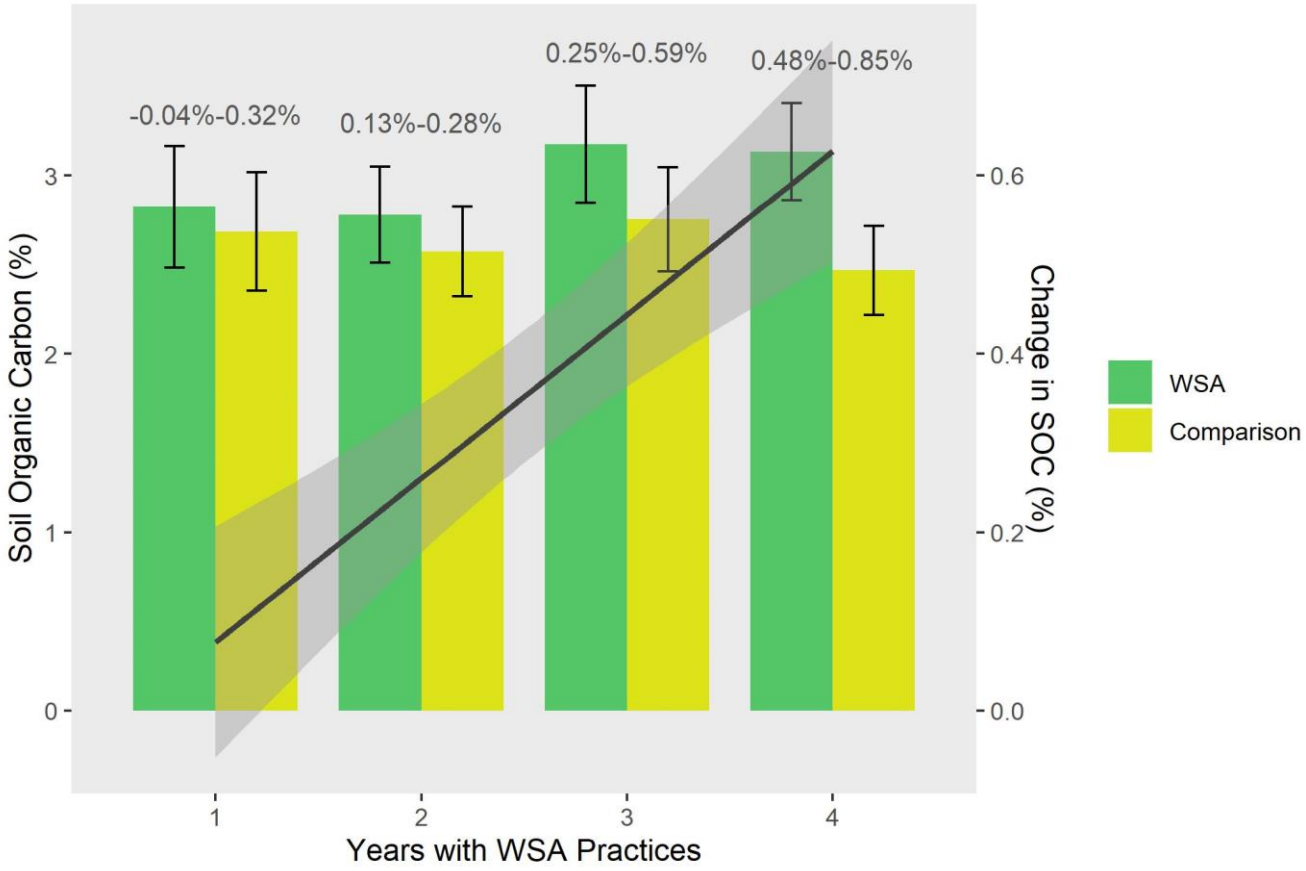
More Crop per Drop

WSA Increases Rainwater Productivity of Maize



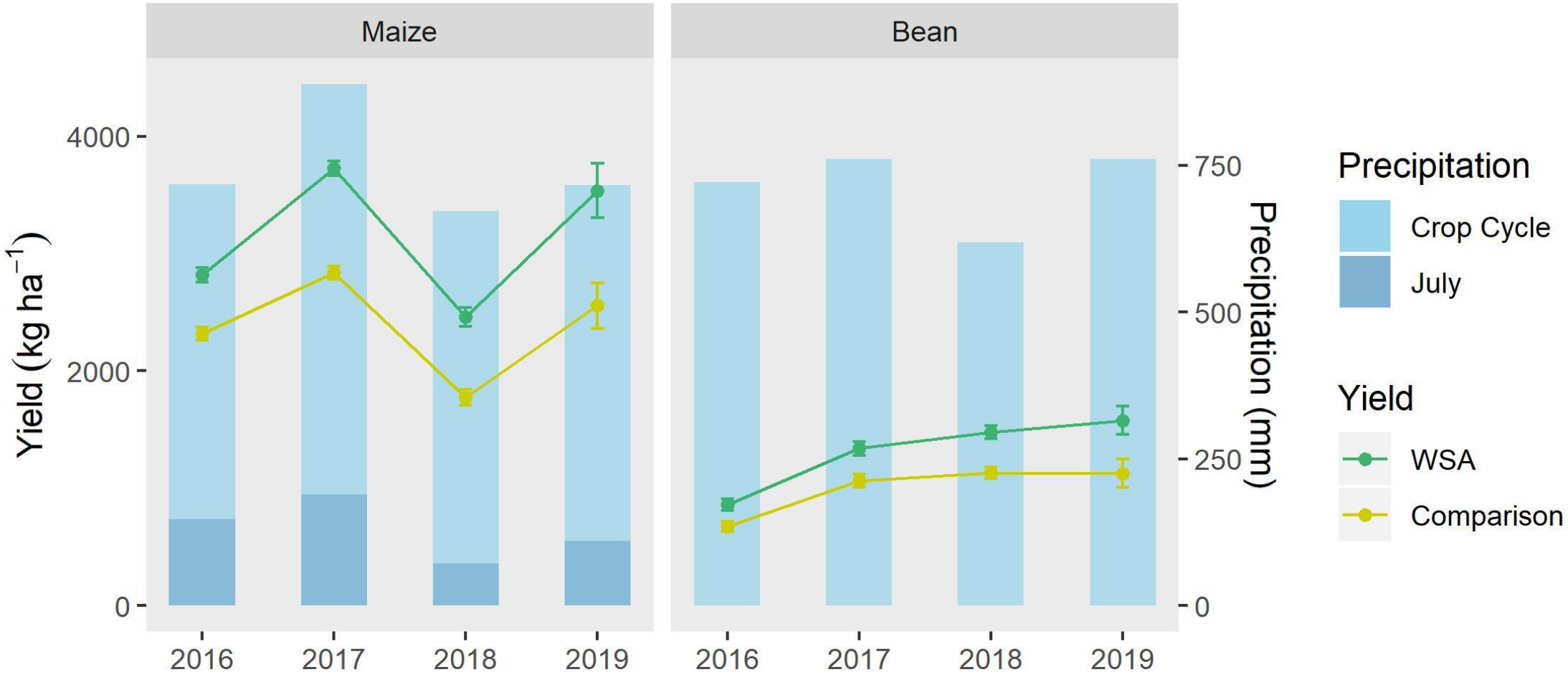
Rainwater productivity of maize in WSA and comparison plots in the dry corridor over the past four years 2016-2019 (N=1291 farmers).
Precipitation during the maize season (May – August) and July precipitation (when the canicula dry spell typically occurs) is shown.

WSA Increases Soil Organic Carbon



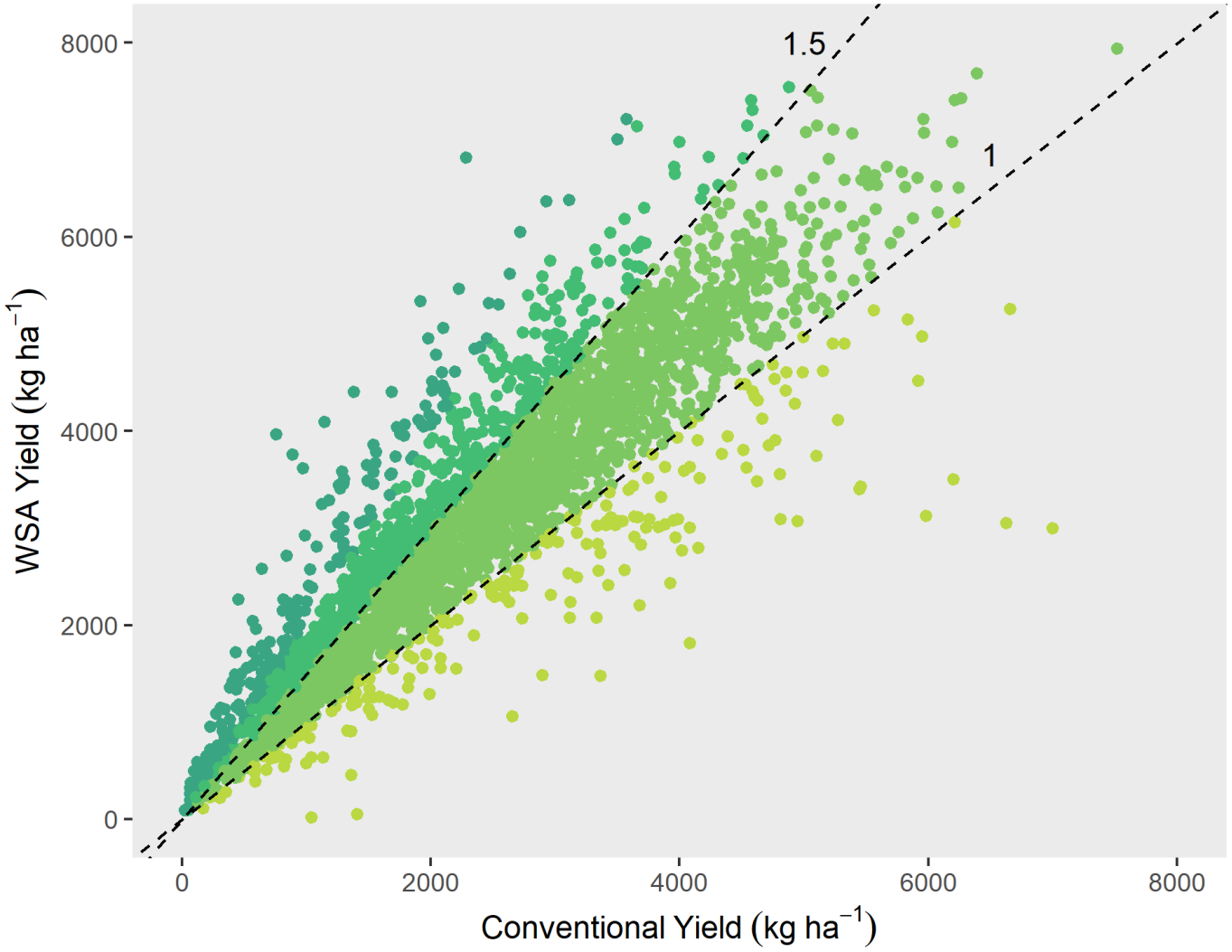
Soil Organic Carbon (%) in WSA maize-bean plots in Nicaragua after 1-4 years of WSA practice implementation. 95% CI and bars and values of mean difference shown. (Year 1, n=38; Year 2; n=55; Year 3, n=45; Year 4, n=47).

WSA Increases Food Production



Maize yield (kg/ha) in WSA and comparison plots in the dry corridor over the past four years 2016-2019 (N=1291 farmers). Precipitation during the maize season (May – August) and July precipitation (when the canicula dry spell typically occurs) is shown.

WSA vs. Conventional Maize Yield



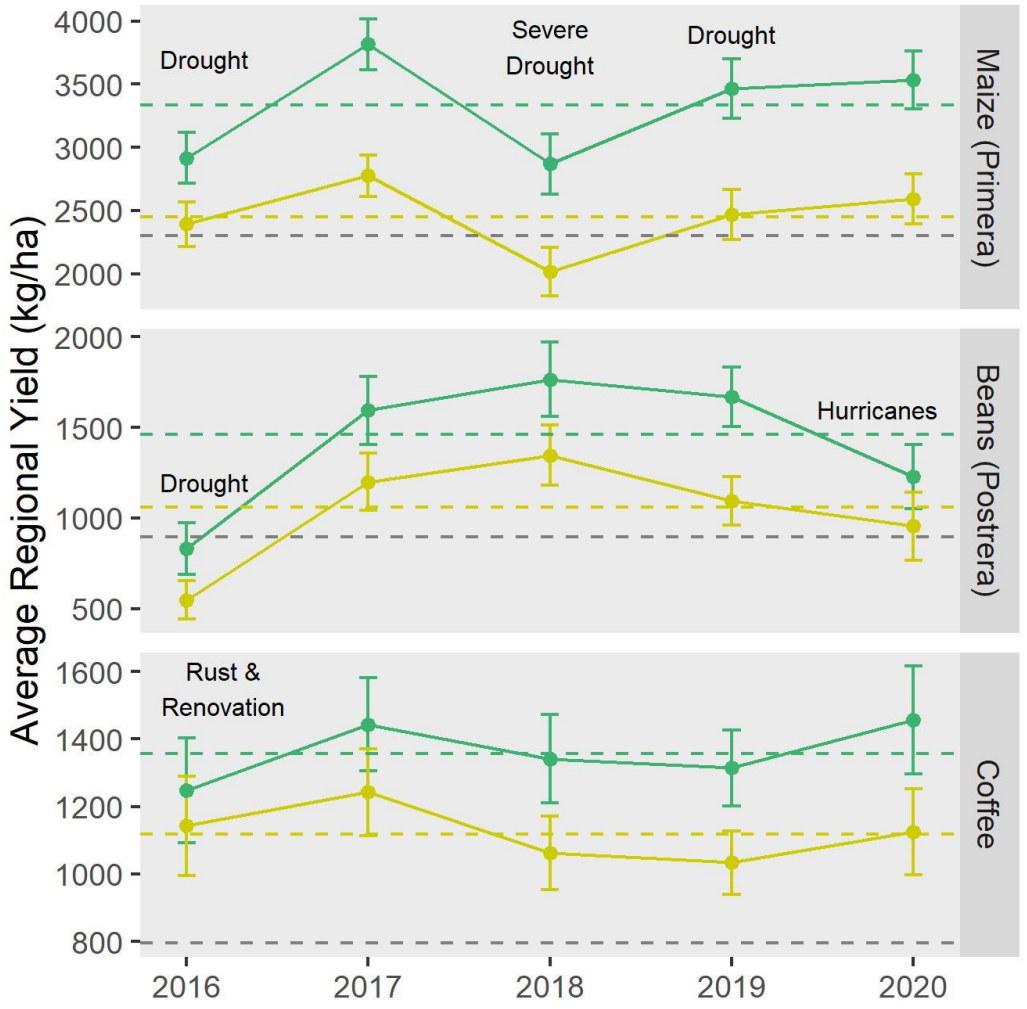
(n=3405 maize harvest years)

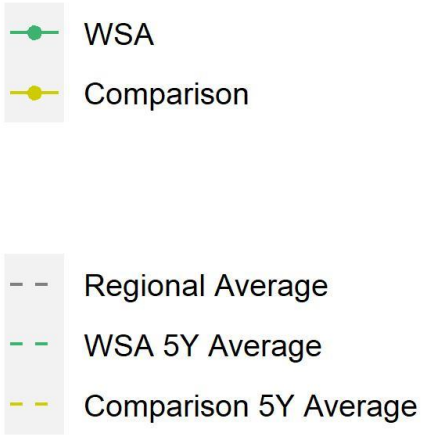
Average maize yields:
3.1 t ha^{-1} with WSA
2.4 t ha^{-1} with Conventional

31% increase in productivity

93% above 1
29% above 1.5x

WSA outperforms the average Central American yield despite climate variation



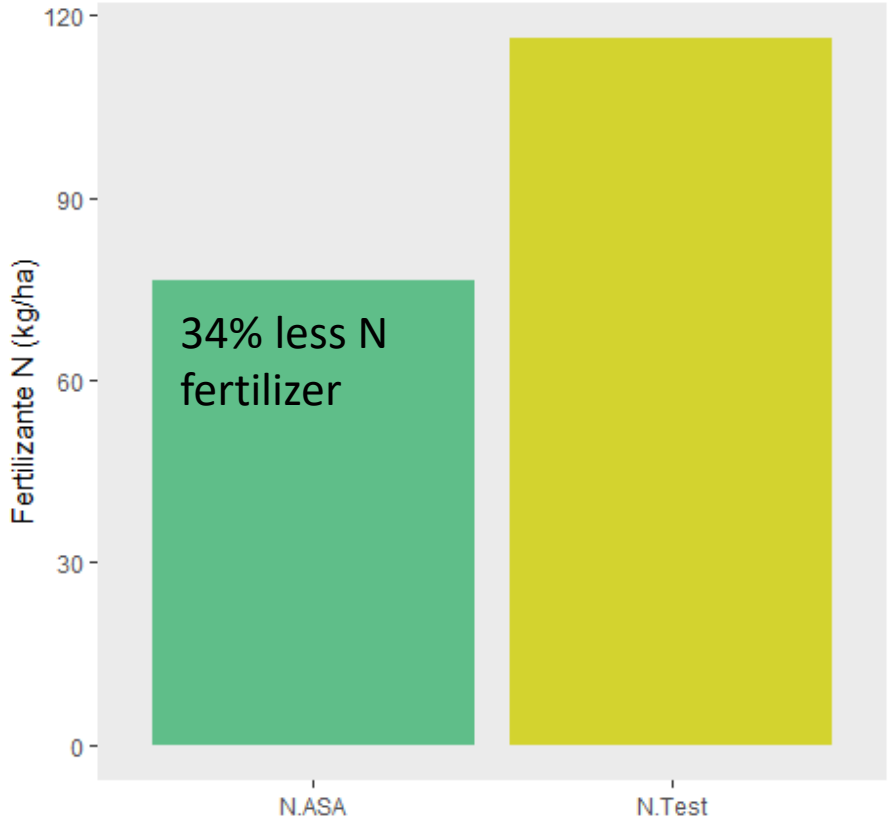


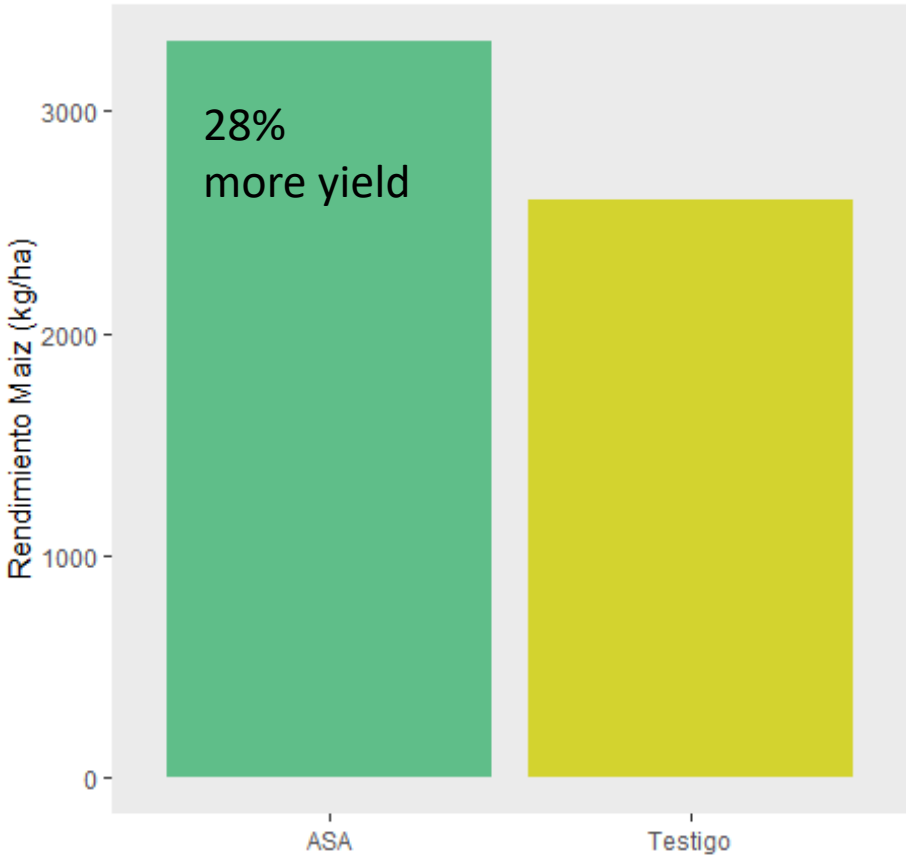
Average regional WSA and Comparison plot maize (primera/spring season), beans (postrera/fall season), and coffee yields over the 5 years of the WSA program. The five-year average yield for WSA and Comparison and the regional average yield for each crop are show with a dashed line. Major agroclimatic events that occurred in each crop cycle are indicated. The 95% confidence intervals of the mean yield values are shown (sub-sample of farms with data spanning the program; Maize, n=148; Beans, n=54; Coffee, n=92)

WSA increases Nitrogen Use Efficiency in Maize

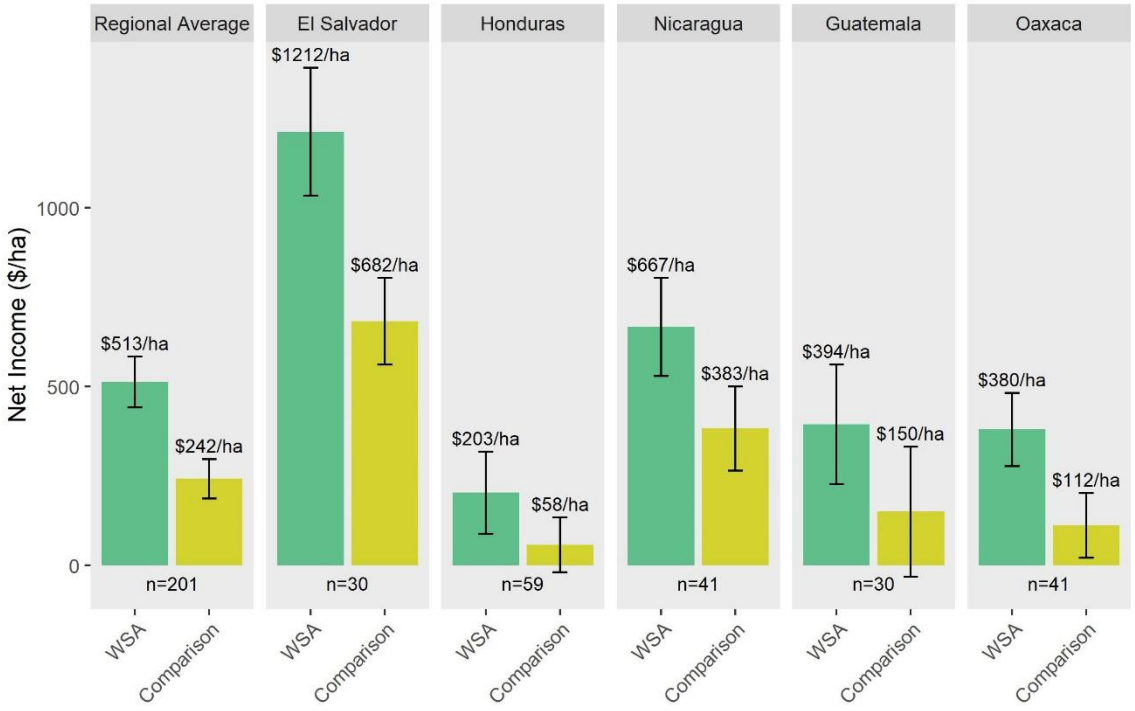
NUE increases by 93%

CRS-Guatemala, 2019

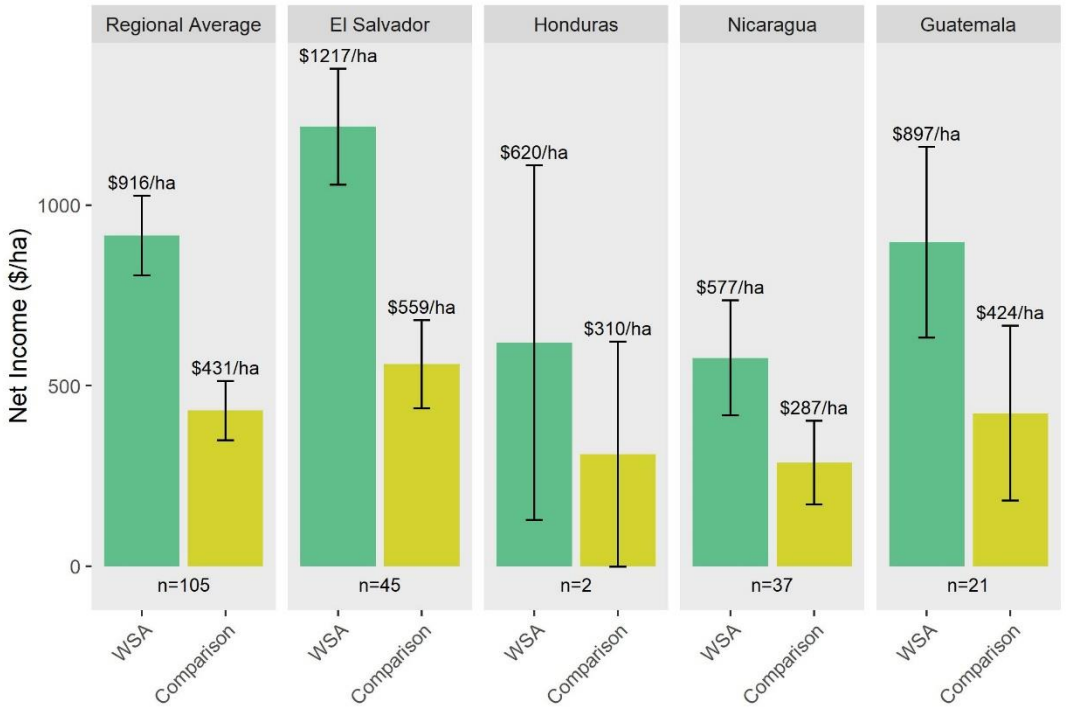




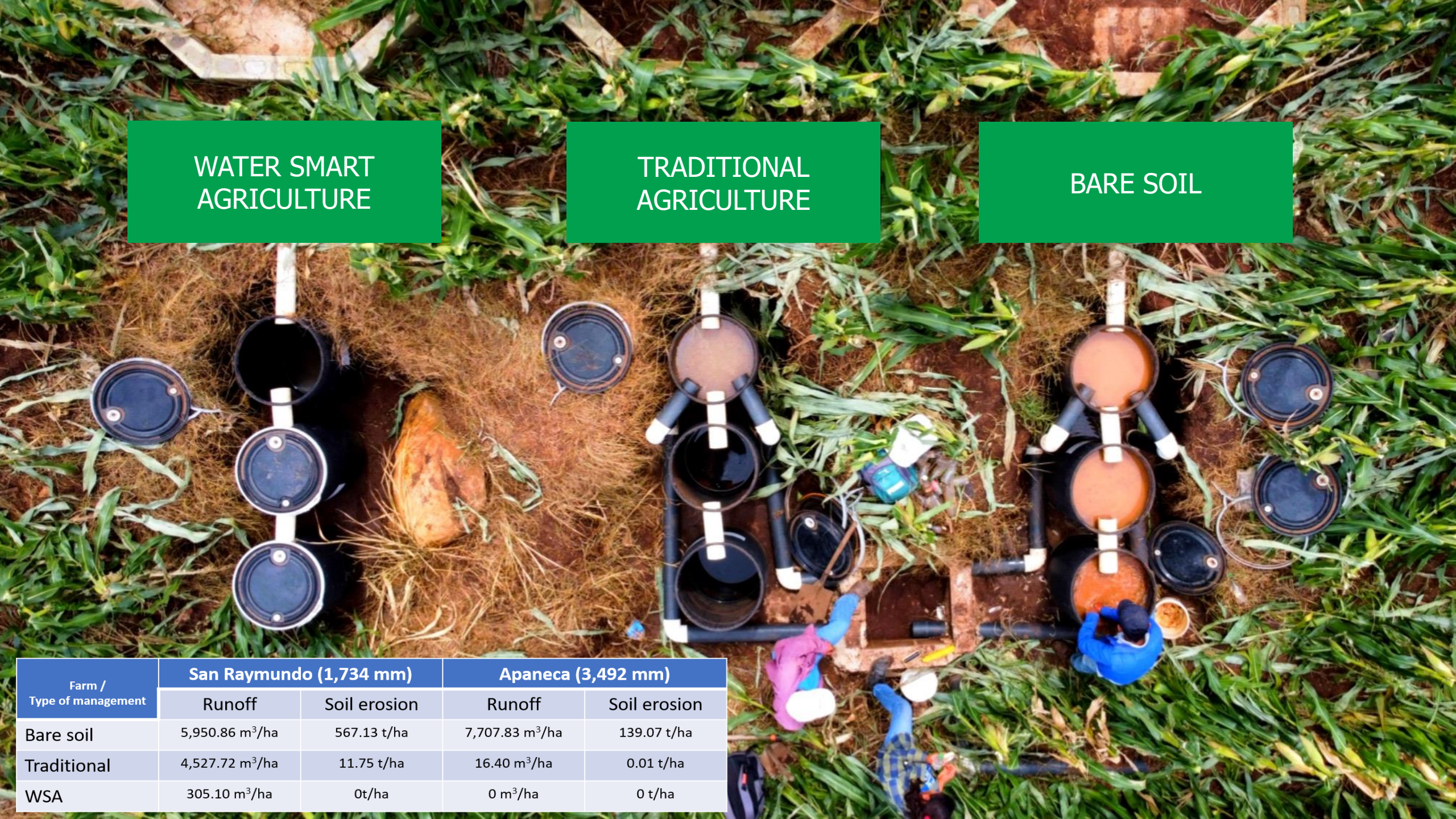
WSA pays off – net income doubles



Average maize yield (kg/ha) with 95% confidence intervals of the mean in 2019 WSA plots vs. comparison plots (n=201).



Average bean yield (kg/ha) with 95% confidence intervals of the mean in 2019 WSA plots vs. comparison plots (n=105).



Farm / Type of management	San Raymundo (1,734 mm)		Apaneca (3,492 mm)	
	Runoff	Soil erosion	Runoff	Soil erosion
Bare soil	5,950.86 m^3/ha	567.13 t/ha	7,707.83 m^3/ha	139.07 t/ha
Traditional	4,527.72 m^3/ha	11.75 t/ha	16.40 m^3/ha	0.01 t/ha
WSA	305.10 m^3/ha	0t/ha	0 m^3/ha	0 t/ha

A series of papers is coming up

Agronomy Journal

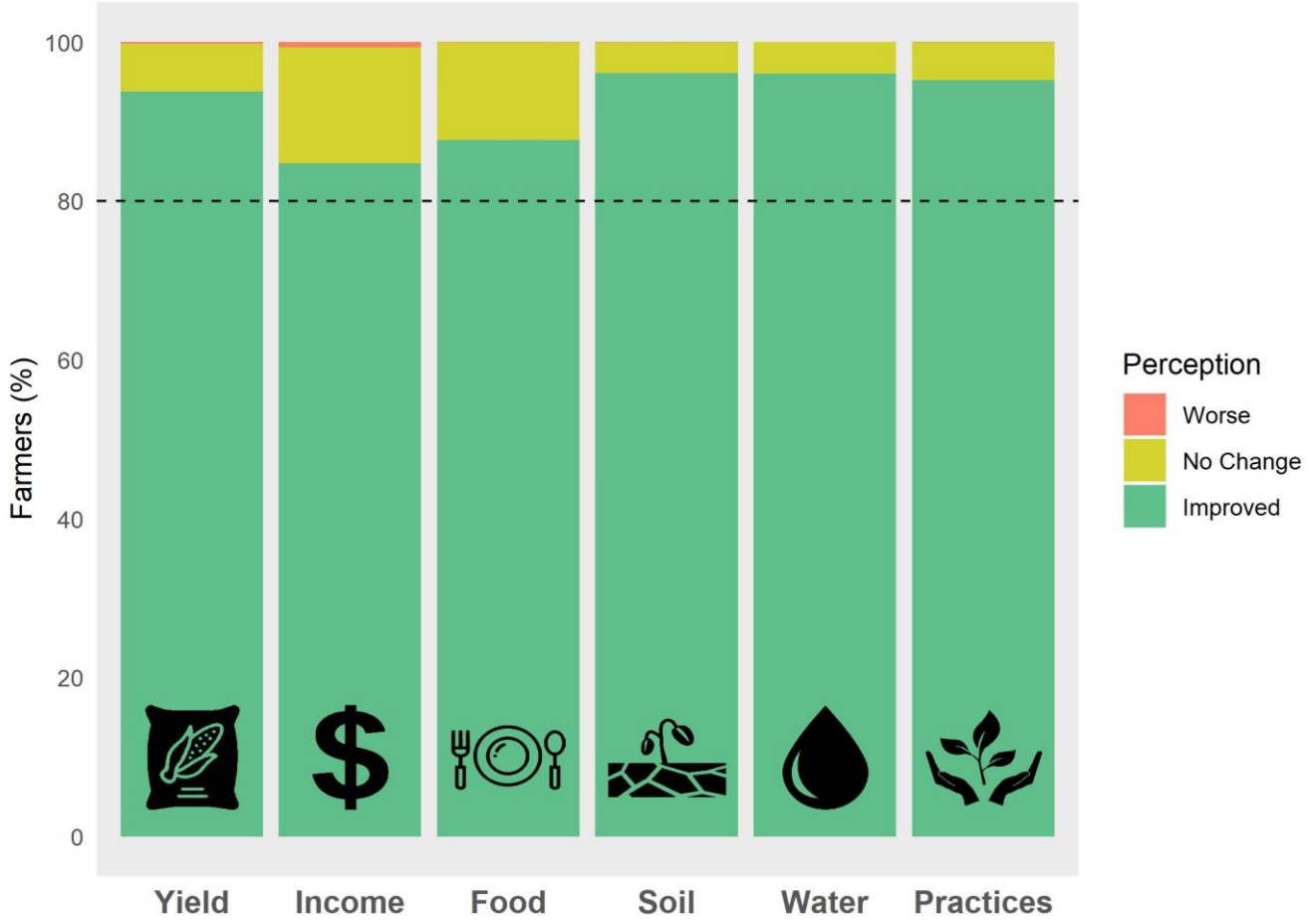
ORIGINAL ARTICLE | Open Access

Boundary line analysis and machine learning models to identify critical soil values for major crops in Guatemala

Harrison W. Smith, Amanda J. Ashworth, L. Lanier Nalley, Axel Schmidt, Marie-Soleil Turmel, Andres Bucaro, Phillip R. Owens

First published: 15 June 2023 | https://doi.org/10.1002/agj2.21412

WSA convinces farmers



Farmer perceptions of WSA practices and their impact on yield, income, food & soil (n=1,454)

Voices from the region

Voices from the region

Building Capacities

Building capacities – FFS & ToT

collaborative learning & experimentation

FFS Materials

CRS /

A basket of available tools & methodologies

Visual Soil Assessment Guide

Field Soil pH Meter

Field Soil Moisture Meter

Soil Fertility Management – 4R

Visual Soil Assessment Guide

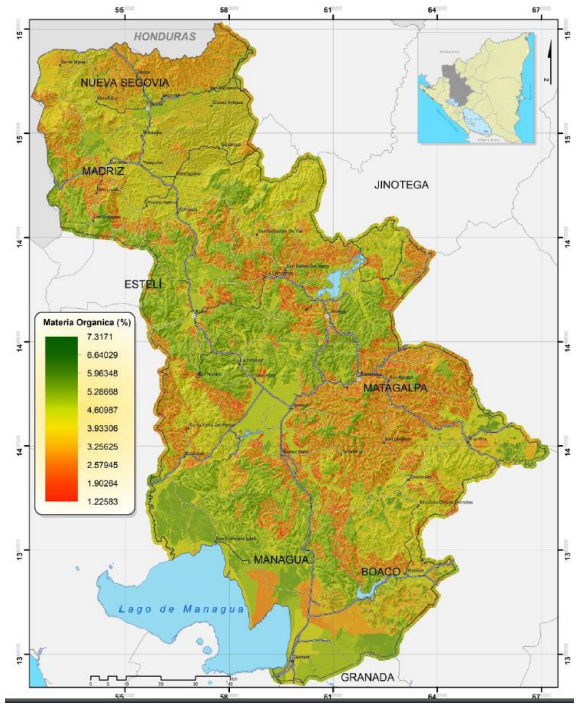
Soil sampling Guides

Soil Carbon Reflectometer

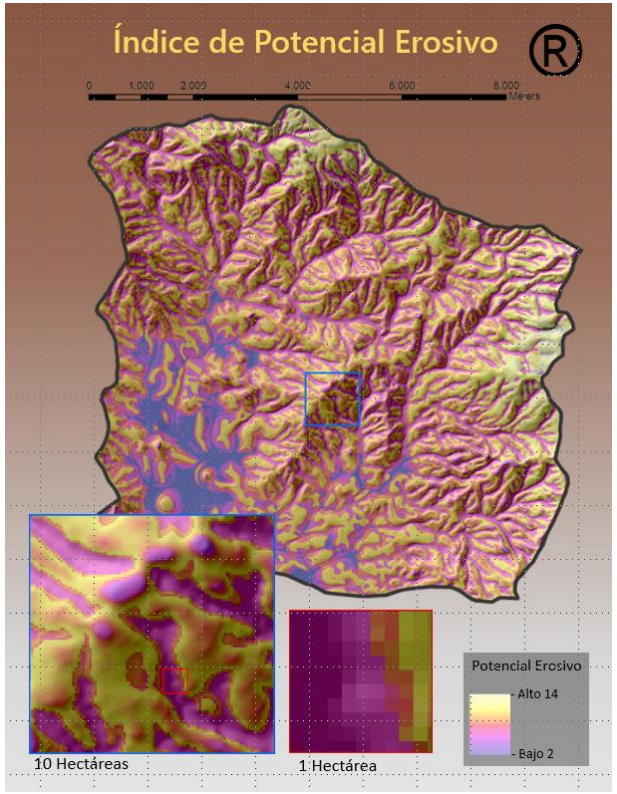
Water Infiltration Measurement

- 59 institutions use at least 4 WSA tools and methodologies
- 207,800 producers have access to WSA services

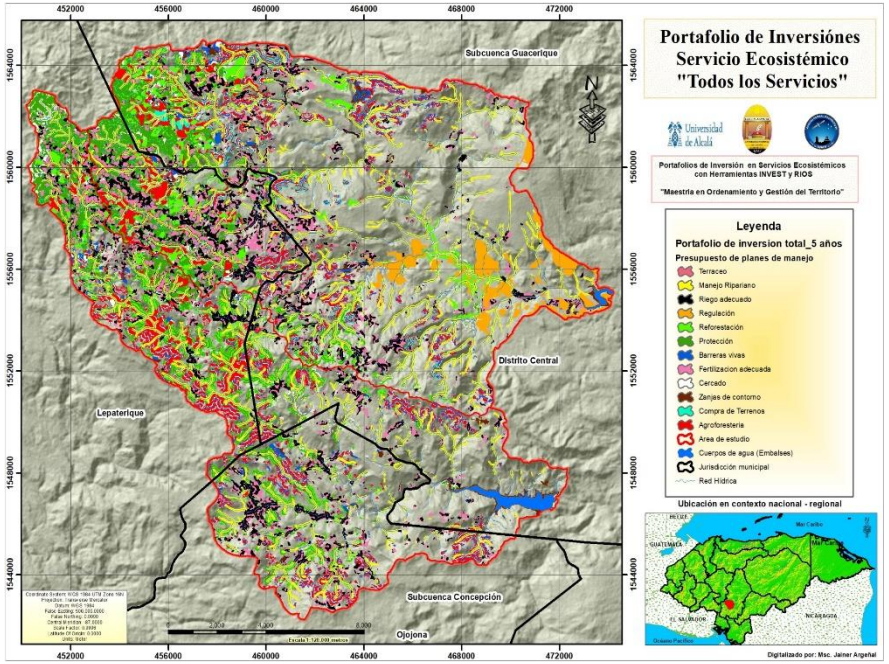
Capacity Building in Digital Soil Mapping



Digital Soil Carbon Mapping



Digital Soil Mapping (erosion)



Annual Investment Plans for Implementation of Soil Management Practices

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Taking digital soil mapping to the field: Lessons learned from the Water Smart Agriculture soil mapping project in Central America

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ABSTRACT

The goal of the Water Smart Agriculture (WSA) program is to improve food security in Central America through changes in policies, programs, and practices in water use efficiency. The Digital Soil Mapping (DSM) project is a component of WSA that aims to create human capital with knowledge and skills in sustainable soil and water management through the production of informative soil maps, under the guiding principle of "managing soils to manage water". DSM provides a platform for producing detailed maps of soil types, properties and functions. However, the transition of DSM from research to operational levels brings a new set of challenges related to input, data processing and outputs. Training based on pilot projects was conducted to build local DSM capacity and infrastructure and incorporate tacit knowledge. The major challenges identified during the pilot stage of the DSM project were: (i) soil data availability, quality and compatibility; (ii) lack of DSM skills; and (iii) lack of product delivery platforms. Country teams comprised of members from public institutions and professional organizations were established. The multi-institutional and interdisciplinary country team adopted a participatory DSM approach and produced functional soil maps capable of supporting decisions at multiple levels.

CRS Competency Models

- Organizational competencies
- NRM and climate-risk management competencies
- Livestock production competencies
- Financial competencies
- Agricultural marketing competencies
- Off-farm business competencies
- Certification scheme

CRS Competency Models

FIGURE 2: NATURAL RESOURCE MANAGEMENT AND CLIMATE-RISK MANAGEMENT COMPETENCIES

Land restoration and climate-risk management planning
Selecting crops and practices to restore land and manage climate risk by using soil analysis/assessment data, historical climate information and trends, climate forecasts and market information to select crops, trees and practices, and to plan the use of land.

Conservation and regenerative agriculture
Protecting and restoring soil health to increase and sustain productivity by minimizing soil erosion and disturbance, maintaining permanent soil coverage and managing diversified production systems.

Integrated soil fertility management
Managing soil fertility to meet crop nutrition needs by evaluating the condition of nutrients in the soil, assessing soil nutrition limitations based on crop needs, and addressing these needs by applying the right products, at the right dose, at the right place and time.

Efficient water resource management
Managing water resources to meet crop needs and prevent soil erosion by capturing rainwater in the soil where it falls, ensuring that water moves slowly off slopes, building and maintaining water reservoirs, and selecting irrigation methods based on their efficiency and accessibility.

Sustainable management of pastures or grazing areas
Managing pasture areas to protect soil and water resources by enclosing them for regeneration, establishing rotation systems with selected grasses and legumes based on their adaptation to the agroecological zone and the dry season feeding plan, ensuring that carrying capacity is not exceeded, and cutting them or grazing animals when mature.

Sustainable and integrated landscape management
Implementing actions to protect and restore the landscape by understanding the needs and interests of all actors who use and/or affect natural resources in the territory; analyzing trends, problems and opportunities for land restoration and climate risk; and planning and implementing actions to address them.

Integrated pest management
Ensuring plant health to improve productivity by using clean, good-quality seed; meeting crop nutrient, water and light needs; and managing pests and diseases by using cultural practices and botanical pesticides as far as possible, and avoiding the use of broad-spectrum and harmful agrochemicals.

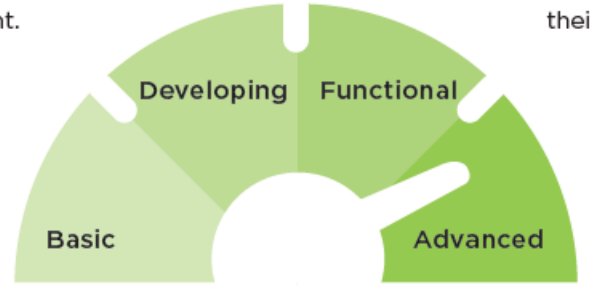
Continuous learning and innovation
Seeking solutions to address constraints, negative trends or opportunities by identifying, analyzing and prioritizing problems or opportunities, identifying and testing solutions to address them, implementing those solutions that work, and sharing them within and beyond the community.

COMPETENCY LEVELS

Developing Demonstrates at least 40% but less than 60% of the behavioral evidence, and needs further focused training and reinforcement.

Functional Demonstrates at least 60% but less than 75% of the behavioral evidence, and can successfully do their job or run their business.

Basic Demonstrates less than 40% of the behavioral evidence, and needs intensive training.



Advanced Demonstrates at least 75% of the behavioral evidence, serving as a role model to others.

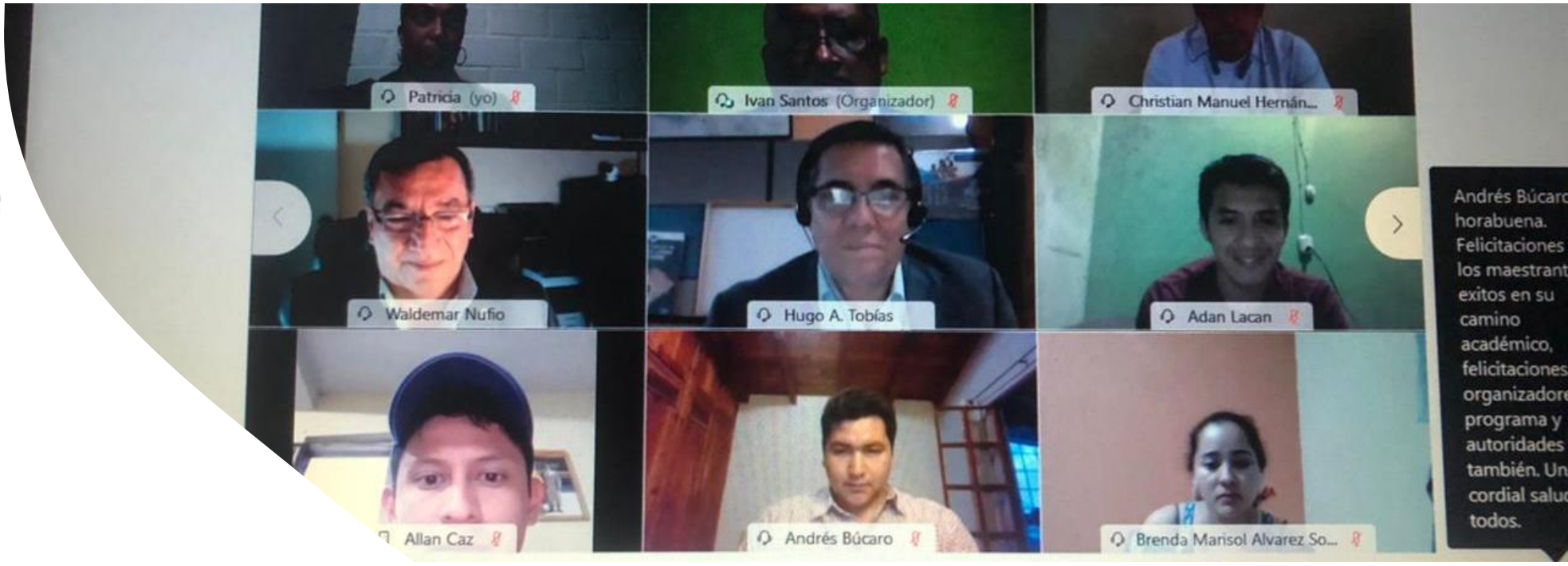
Regional Master Courses:

Manejo Sostenible de Suelos en Ambientes Tropicales MISAT

UNA Nicaragua

Manejo Sostenible de Suelos y Agua

USAC Guatemala



Scale as of 2020

3,000+ on-farm demonstration plots in 5 countries

96 institutions using WSA capacity building tools and methodologies

1,706 extensionists and professors trained directly

6,000 extensionists and students trained through ToT cascades

Over 90,000 farmers and promoters reached by extension networks.

Currently conducting a comprehensive adoption study in 5 countries (results in October 2023)

From Farmer's fields ….

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Scaling

Agriculture Landscape Restoration

Keurig DrPepper

blueharvest

root capital

Foundation Jessica & Alejandro Foung

Cosecha Azul Regenerativa

Shockwave Foundation

These data include farmers and areas in Guatemala, El Salvador, Honduras and Nicaragua.

RAÍCES EL SALVADOR

THE HOWARD G. BUFFETT FOUNDATION

2018

254 smallholder farmers

183 hectares

(452 acres)

2022

3,496 smallholder farmers

3,959 hectares

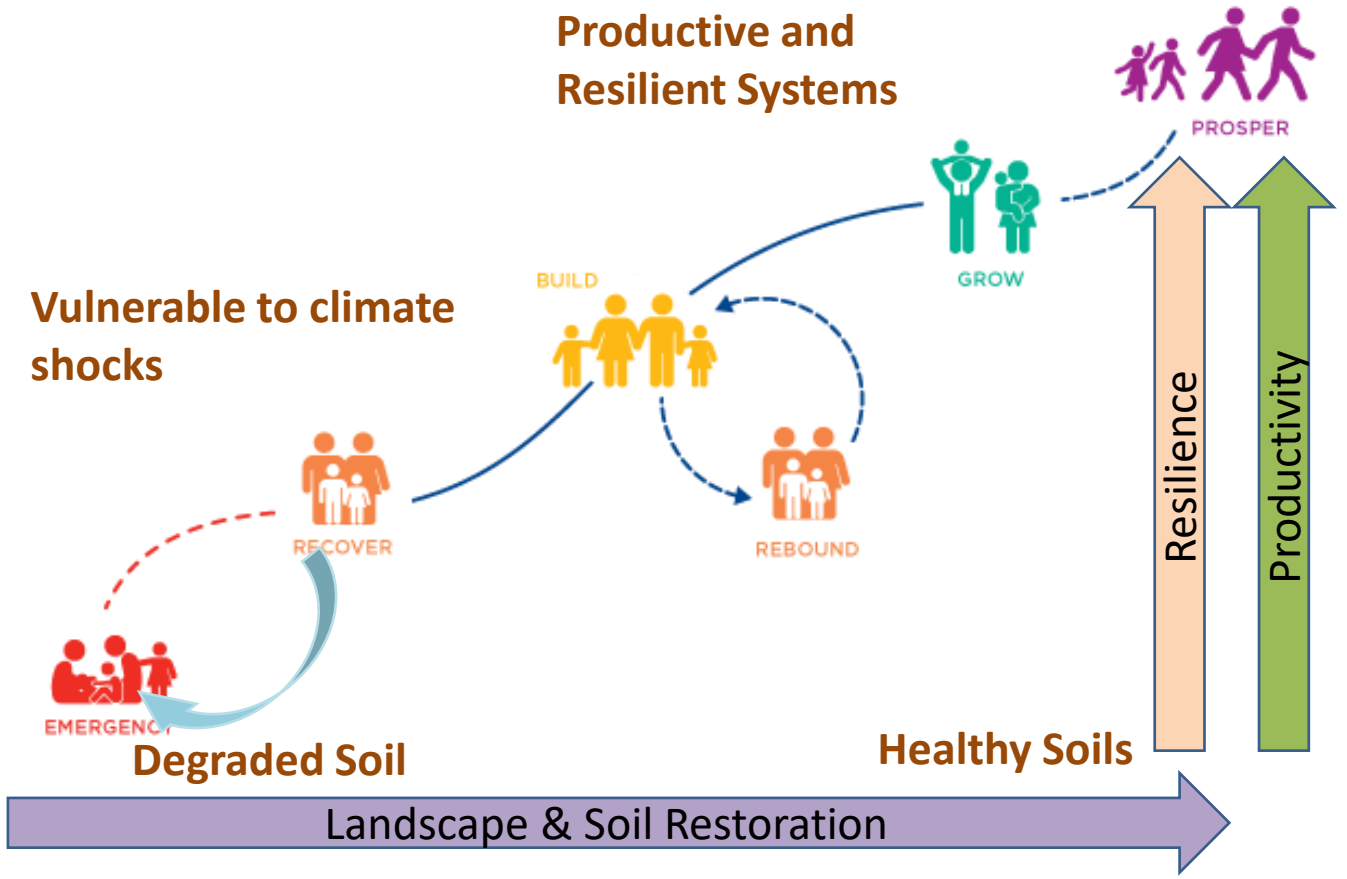
(9,783 acres)

CRS

CRS WSA Soil Restoration Platform

All people achieve decent and resilient livelihoods in sustainable landscapes

- Restore degraded landscapes and effectively adapt to the impacts of climate change.
- Increase both the productivity and the income of the people of the agricultural families.



Goal 2030:

500,000 farm families

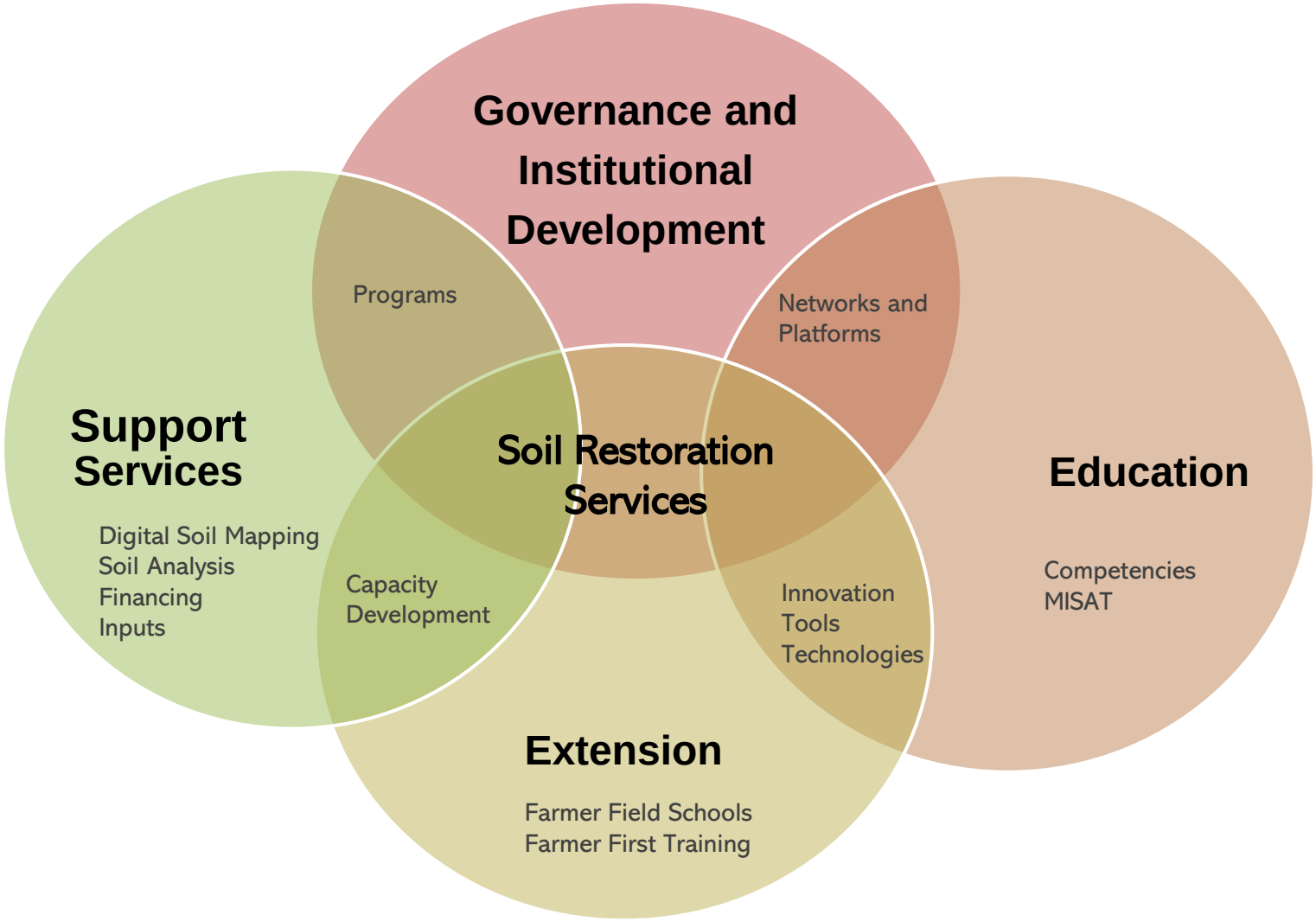
Water Smart Agriculture Platform – Regional Strategy for Scaling

ASA
AGUA Y SUELO PARA LA AGRICULTURA

Todos somos ASA!

CRS

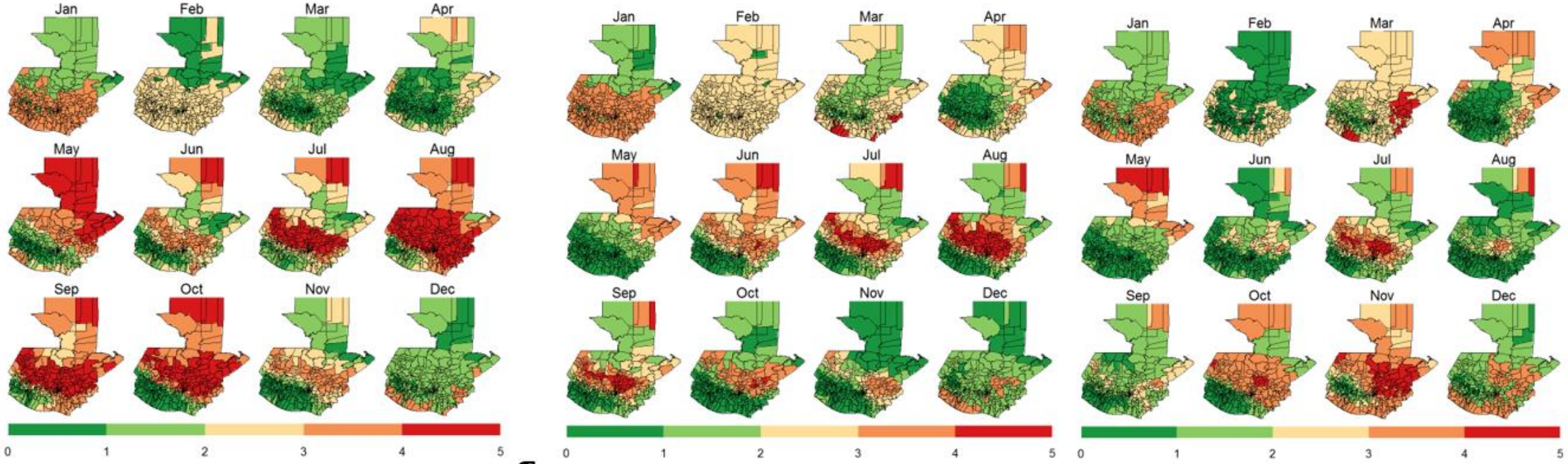
Scaling up Water Smart Agriculture



Recent examples of partnerships for scale

Recent activities WSA2

High-resolution spatial data set on extreme weather hazards (5x5 km)

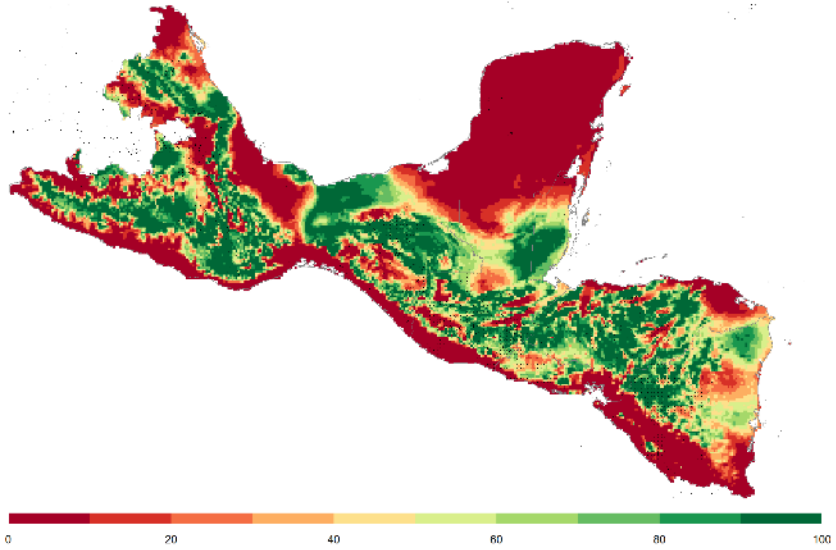


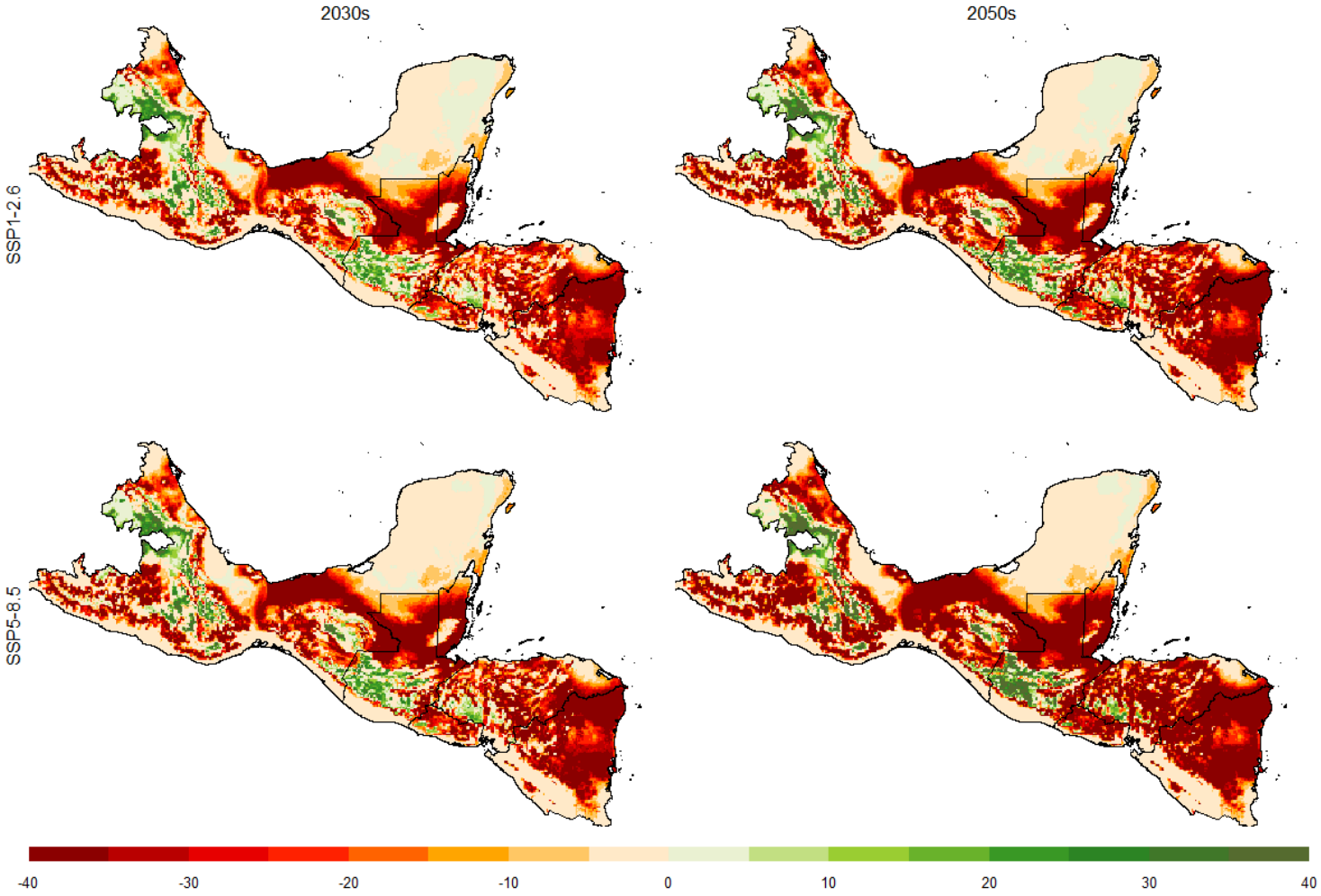
¶

a)→El·Niño·Scenario → → → b)·Normal·Climate·Scenario→ → c)·La·Niña·Scenario→¶

- **Monthly projection of the probability of Dry day Hazard for Guatemala under three climate conditions (1 – Very low, 2 – Low, 3 – Medium, 4 – High, 5 – Very High)**

Beans





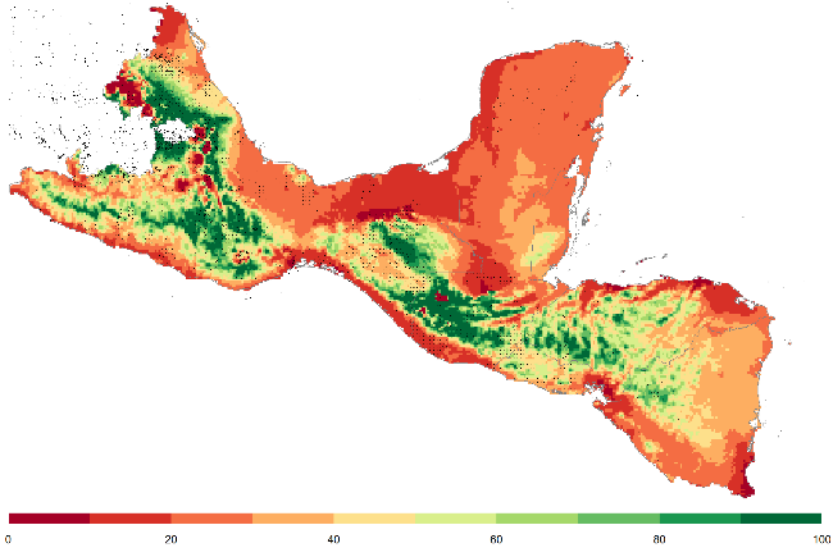
Current Suitability

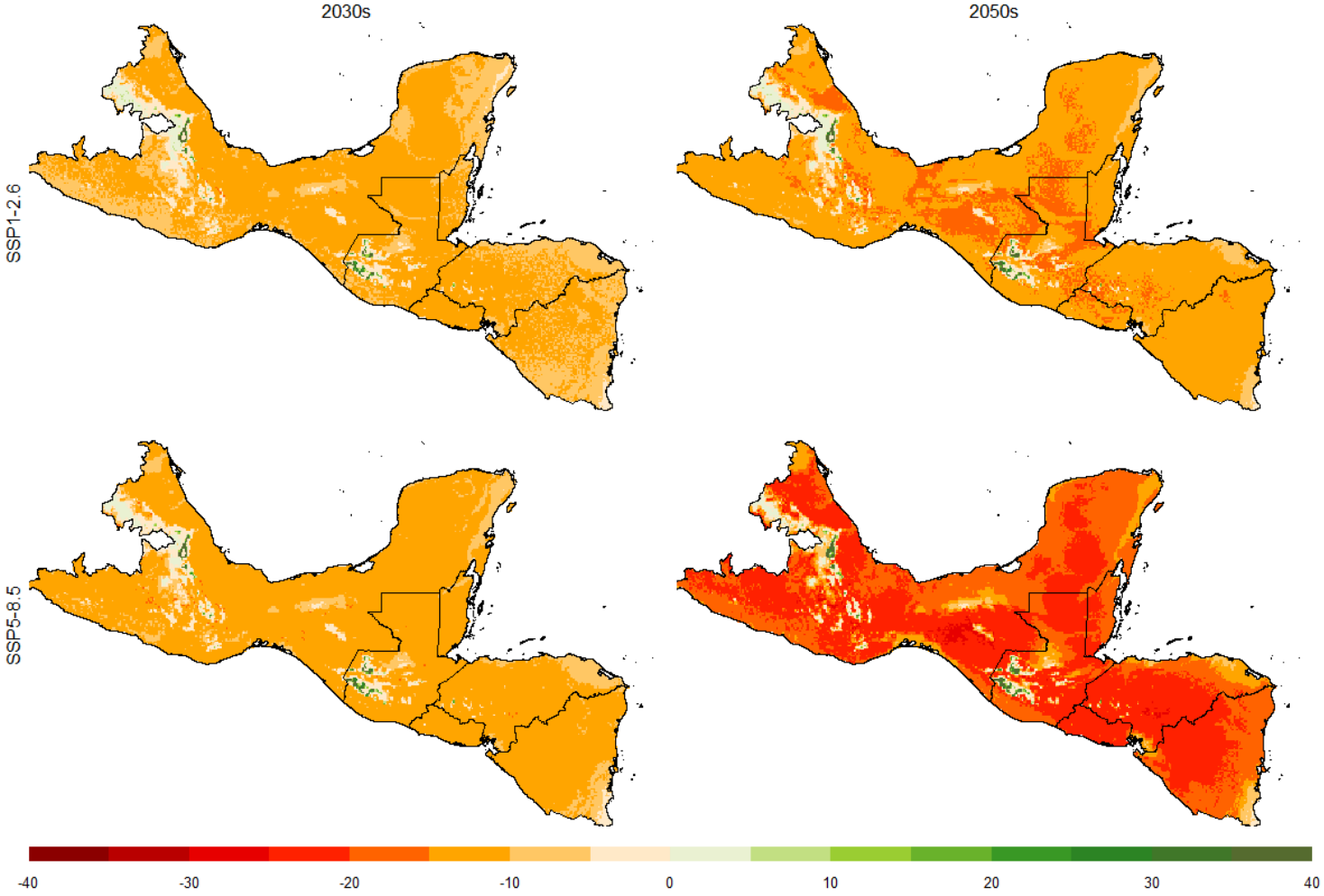
(WorldClim v2.1 1970-2000)

Suitability change for future

(CMIP6 SSP1-2.6, SSP2-4.5, SSP5-8.5; 2030s, 2050s, 2070s)

Maize





Current Suitability

(WorldClim v2.1 1970-2000)

Suitability change for future

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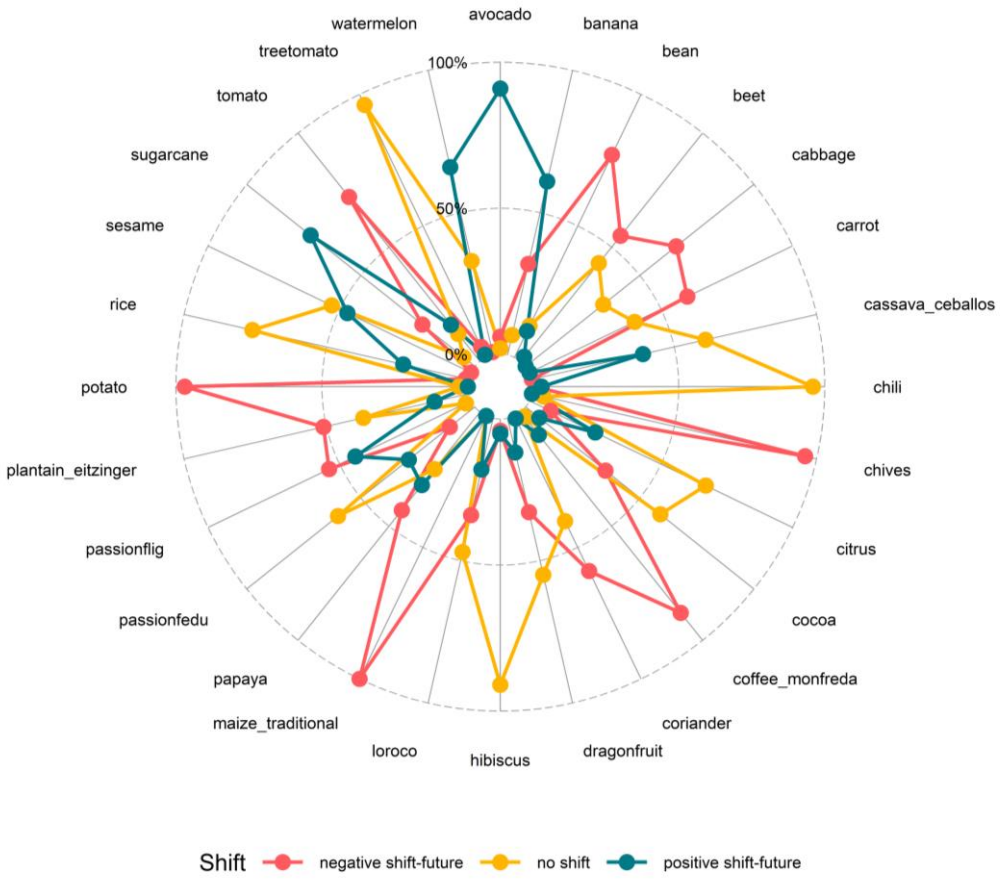
Honduras-Shift 2050



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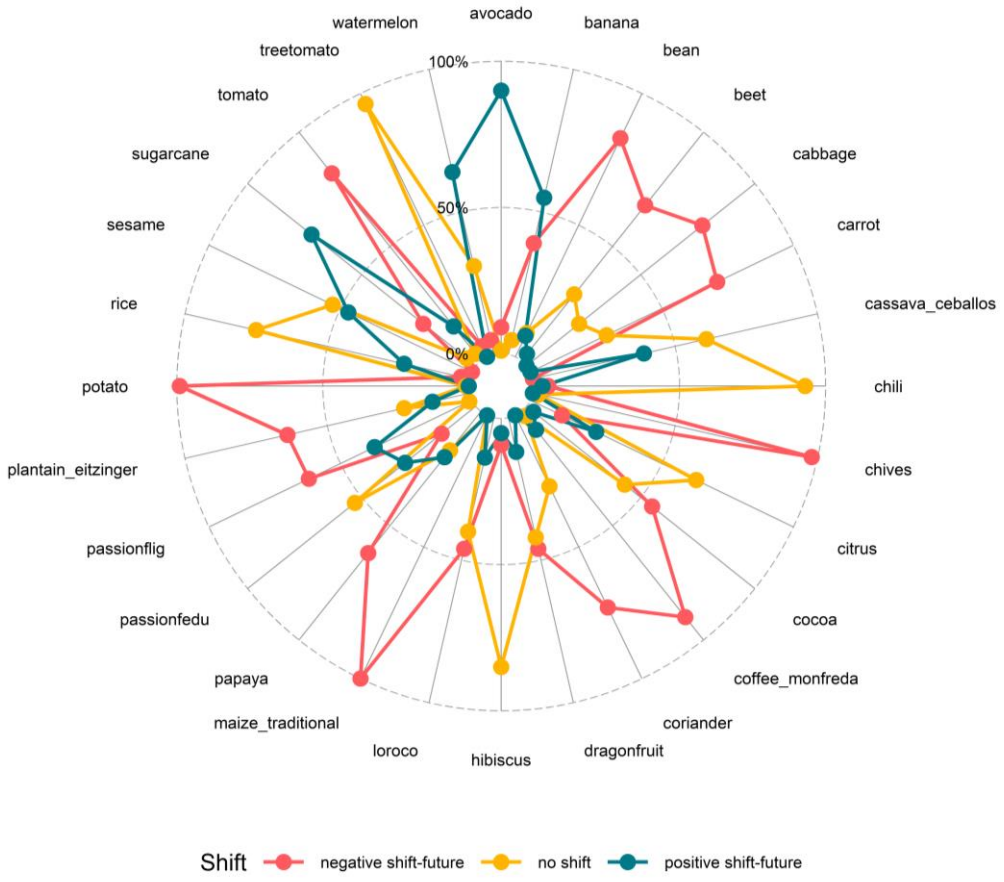

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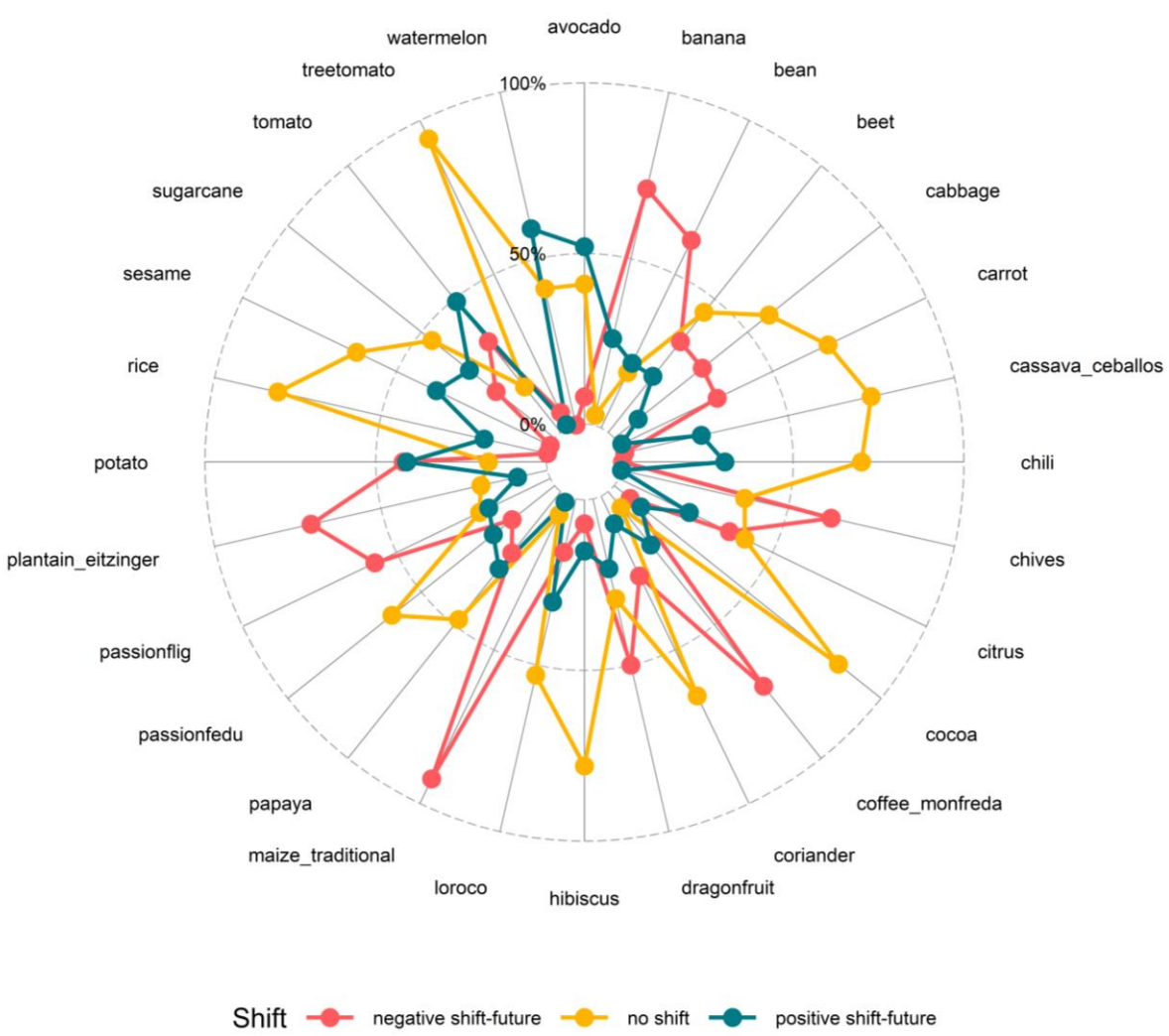
Guatemala SHIFT-2050



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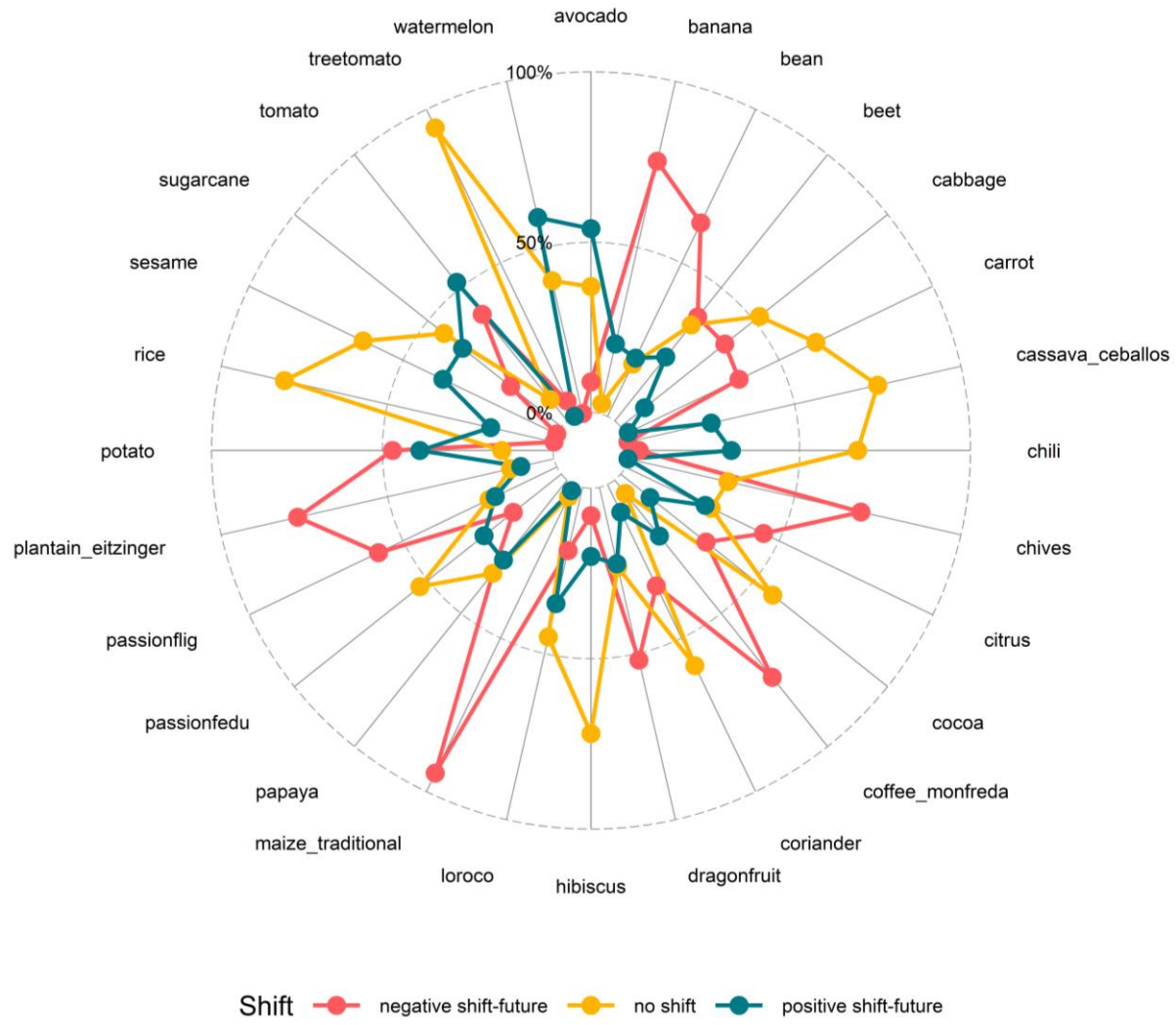

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Water Smart Agriculture Phase 2

Producción

Objetivo Estratégico 1

ALCANCES DEL AÑO 01

- 810 agricultores con fincas nodos
- 1678 agricultores con fincas satélites (falta verificar)
- 50 extensionistas capacitados (falta verificar)

ACTIVIDADES CLAVE

- Seleccionar cultivos, agricultores de fincas nodos y satélites
- Capacitar a extensionistas
- Implementar producción y diversificación de cultivos desde la finca
- Articular mercado, jóvenes y extensión para todos
- Evidenciar impacto (rendimientos, salud de suelos)

RETO PRINCIPAL

Restauración de suelos, producción y diversificación para mercado

RESULTADOS

- Diversificar los cultivos
- Incrementar los rendimientos
- Mejorar la salud de suelos
- Producir semillas de coberturas y abonos verdes
- Certificar por competencias agricultores modelos en prácticas ASA y diversificación.

INDICADOR PRINCIPAL

Agricultores de fincas nodos y satélites posicionan 1 o 2 cultivos en mercados

Mercados

Objetivo Estratégico 2

ALCANCES DEL AÑO 01

Definición de cadenas de valor prioritarias, Identificación de potenciales Agroempresas, Acercamiento a compradores, Inicio de relación con actores locales, inicio de alianzas financieras, Alianzas con otros proyectos de CRS APL y Fondo Isidro, Malla Curricular que puede adaptarse a diferentes niveles

ACTIVIDADES CLAVE

Coordinación OE1, Perfilar productores, Procesos de capacitación, Ferias comerciales, Identificación de aliados SP (sector privado).

RETO PRINCIPAL

Lograr modelos de negocios que cumplan suplencia requerida en los mercados.

RESULTADOS

Aumento de 20% de ingresos, 1000 productores certificados en competencias de mercado y financieras, 39 Agroempresas desarrolladas, 4 productos financieros disponibles para participantes

INDICADOR PRINCIPAL

Vinculación de la finca a los mercados

Extensión para Todos

Objetivo Estratégico 4

RESULTADOS

Más de 1,100 técnicos, promotores y productores inscritos en el aula virtual, 7 cursos para productores y 6 cursos para extensionistas

RETO PRINCIPAL

Poca conectividad y falta de dispositivos móviles

ACTIVIDADES CLAVE

120 horas durante 8 semanas al aire de la campaña de radio bianual, talleres de alfabetización digital y replicas, 1 curso de GAAP y 1 curso de educación financiera

ALCANCES DEL AÑO 01

4 millones de oyentes potenciales de la radio, 21,000 seguidores en redes sociales, 3 millones de interacciones alcanzados en una sola publicación, más de 900 suscriptores en la línea de asistencia técnica y 103 personas reciben talleres de alfabetización digital

INDICADOR PRINCIPAL

Difusión de avances en agricultura de conservación y practicas ASA entre jóvenes, mujeres y hombres del sector agrícola

Juventud

Objetivo Estratégico 3

RESULTADOS

Al menos 644 jóvenes hombres y mujeres encuentran oportunidades de medios de vida en sus localidades o tienen un rol activo en el liderazgo de planes de finca de sus familias u otros en sus comunidades.

RETO PRINCIPAL

Conseguir el alcance territorial en todas las zonas de influencia de ASA y conectar a los jóvenes con oportunidades de emprendimiento en los contextos económicos de sus comunidades. Atenuar el impulso a la migración.

ACTIVIDADES CLAVE

Los jóvenes definen sus trayectorias de formación hacia la producción diversificada, emprendimiento y/o asesoría técnica.

El proyecto ofrece formación específica y acompañamiento para los participantes.

Ofrece apoyo en especie para start-ups y busca conexión con oportunidades de empleo en el sector

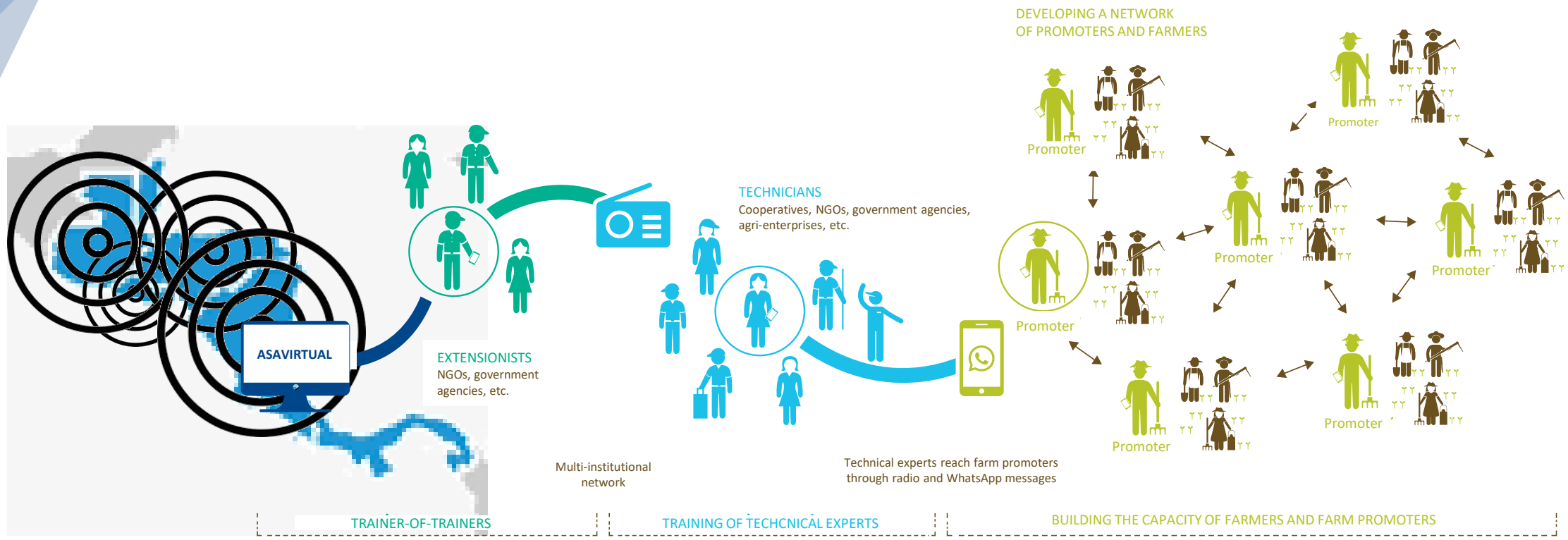
ALCANCES DEL AÑO 01

Más de 350 jóvenes han iniciado el proceso de formación en agricultura de conservación, habilidades para la vida y tecnología

INDICADOR PRINCIPAL

Jóvenes formados (certificados por habilidad) se han insertado en un medio de vida agrícola o participan activamente en la gestión conjunta de fincas agrícolas propias como negocio familiar

Hybrid agriculture extension= in-person + virtual



ON-SITE FARMER TRAINING SUPPORTED BY VIRTUAL TOOLS
(on-line videos, social media, radio and WhatsApp)

ASAvirtual

From Farmer Field Schools to Virtual Classrooms

IVR/WhatsApp

- Connect farmers to ASA technical experts to resolve questions they might have on how to implement ASA practices.
- All farmer queries are answered within 24 hours. A searchable database houses all questions and respective answers.
- Database allows team to monitor and identify which questions arise most often.
- Database informs resource creation and the development of future content.

Agua y Suelo para la Agricultura - ASA
Publicado por Renato Hernández · 2 de mayo a las 18:16 ·

Esta semana en #ConLosPiesEnLaTierra
La aplicación correcta de las 4 Recomendaciones (4R) incrementa la productividad del maíz al reducir las pérdidas, maximizar la absorción de nutrientes y reducir el impacto ambiental del uso de fertilizantes sobre el agua, el suelo y el aire
Las 4R son:
- El uso de la fuente más apropiada
- La dosis más adecuada
- El momento que más lo demanda la planta
- El Lugar de aplicación idóneos para su rápida absorción

Mira cómo se aplican las 4R en el cultivo del maíz para poder hacer un uso más eficiente de los fertilizantes

Ver estadísticas y anuncios
Promocionar publicación

2,3 mil
28 comentarios 1,1 mil veces compartido

Estadísticas totales
Consulta más detalles sobre tu publicación.

Impresiones de publicaciones	Alcance de las publicaciones
406.138	393.143

Estadísticas totales
Consulta más detalles sobre tu publicación.

Impresiones de publicaciones	Alcance de las publicaciones
3.368.268	3.271.618

Alcance

Número de personas que vieron alguna de tus publicaciones al menos una vez. El alcance es diferente de las impresiones, que pueden incluir varias visualizaciones de las publicaciones por parte de las mismas personas. Esta métrica es una estimación. Más información

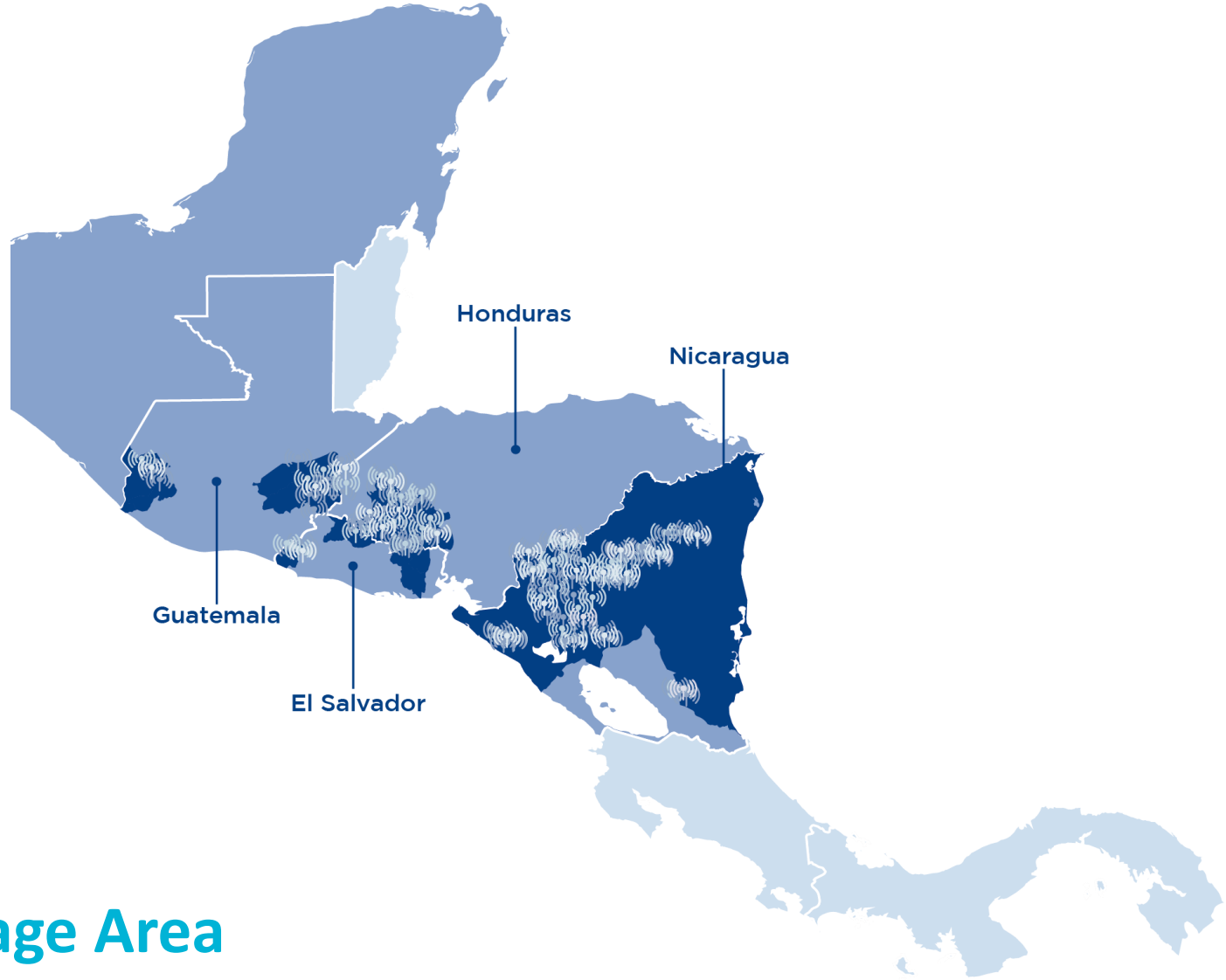
Agua y Suelo para la Agricultura - ASA
Publicado por Renato Hernández · 14 de marzo ·

¡Un cerro de maíz!
El productor Miguel Ángel Cornejo del proyecto Raíces El Salvador en Chalatenango, muestra orgulloso la cosecha de maíz, que logró con la implementación de las #PrácticasASA
Está año quedó muy satisfecho por el rendimiento obtenido; 100 quintales por manzana con la semilla híbrida PIONEER 3966W. La siembra del abono verde canavalia, el manejo del rastrojo y árboles dispersos en su parcela fueron las prácticas ASA que incorporó en sus cultivos para mejorar su cosecha y sus ingresos
#TodosSomosASA
#SomosRaicesSV

Ver estadísticas y anuncios
Promocionar publicación

17 mil
468 comentarios 946 veces compartido

Radio Coverage Area



RADIO STATIONS

EL SALVADOR
Radio Izcanal
Radio La Ranchera
Radio Sonora

HONDURAS
HRN
Radio Congolón
Radio San Miguel

NICARAGUA
Radio ABC Stéreo
Radio Hermanos
Radio Madriz

GUATEMALA
Perla de Oriente
Salama Stéreo
URRAM
Stéreo Génesis
Stéreo Solar Chiquimula
La Jefa

CRS CATHOLIC RELIEF SERVICES ASA AGUA Y SUELO PARA LA AGRICULTURA

#ConLosPiesEnLaTierra

¡Nicaragua, escúchanos para saber más sobre agricultura sostenible!

A partir del 17 de abril al 9 de junio estaremos en:

ABC Stereo 99.7/102.1 FM	Lunes y martes	7:20 - 8:00
Radio Dinámica 103.7/ 104.9 FM	Martes y viernes	17:00 - 18:00
Radio Stereo Yes 90.1 FM	Lunes y viernes	7:00 - 7:45

www.asa.crs.org /AguaVerdeASA @AguaVerdeASA

#WhatsASA
2113-0268

CRS CATHOLIC RELIEF SERVICES ASA AGUA Y SUELO PARA LA AGRICULTURA

#ConLosPiesEnLaTierra

¡Honduras, escúchanos para saber más sobre agricultura sostenible!

A partir del 17 de abril al 9 de junio estaremos en:

América 94.7 FM/590 AM	Martes	14:00 - 14:55
Latina 98.7 FM	Miércoles y viernes	15:00 - 16:00
Marcala 90.3 FM	Martes y jueves	17:00 - 18:00

www.asa.crs.org /AguaVerdeASA @AguaVerdeASA

#WhatsASA
2235-9309

CRS CATHOLIC RELIEF SERVICES ASA AGUA Y SUELO PARA LA AGRICULTURA

#ConLosPiesEnLaTierra

¡El Salvador, escúchanos para saber más sobre agricultura sostenible!

A partir del 17 de abril al 9 de junio estaremos en:

Radio Sonora 104.5 FM	Martes y jueves	15:30 - 16:00
Radio Izcanal 92.1 FM	Lunes y viernes	16:30 - 17:30
Segundo Montes 92.1 FM	Lunes y miércoles	16:00 - 17:00

www.asa.crs.org /AguaVerdeASA @AguaVerdeASA

#WhatsASA
2113-0268

CRS CATHOLIC RELIEF SERVICES ASA AGUA Y SUELO PARA LA AGRICULTURA

#ConLosPiesEnLaTierra

¡Guatemala, escúchanos para saber más sobre agricultura sostenible!

A partir del 17 de abril al 9 de junio estaremos en:

Chortí 95.9 FM Tierra	Jueves	17:00 - 18:00
Radio Éxito 107.1	Lunes y miércoles	17:00 - 18:00

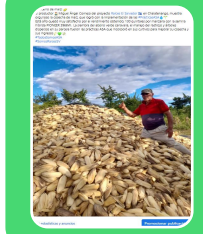
www.asa.crs.org /AguaVerdeASA @AguaVerdeASA

#WhatsASA
2269-9489

WSA2 - Extension for All

4 million radio followers

120 radio programs for 8 weeks airtime twice a year



21,000 social media followers

Key messages prior to planting seasons and to prepare for El Niño

> 900 subscribers to IVR/Whatsapp technical hot line

Weekly announcements following crop calendars

>100 persons trained in Digital Literacy workshops

Growing number of eLearning courses on ASAvirtual

(farmers and soon for extensionists)

/AguaVerdeASA

www.asa.crs.org/blog

@AguaVerdeASA

asavirtual.instructure.com*

Challenges & Solutions

Challenge: limited connectivity in rural areas

Solution: Make all content accessible off-line.

Challenge: Low-levels of literacy

Solution: All content is written and narrated.

Challenge: Limited digital literacy skills

Solution: Develop courses both online and in-person to give farmers the tools they need for success.

Some reflections

Main Take-Aways

- Combining Conservation Ag principles & ISFM/4R with basic agronomic practices result in improvements in soil health, water and nutrient use efficiency, and translate into significantly increased productivity and economic benefits for smallholders, even in the short term.

- With WSA, smallholder farmers produce more, earn more and are more resilient to drought and weather extremes in the Dry Corridor of Central America.

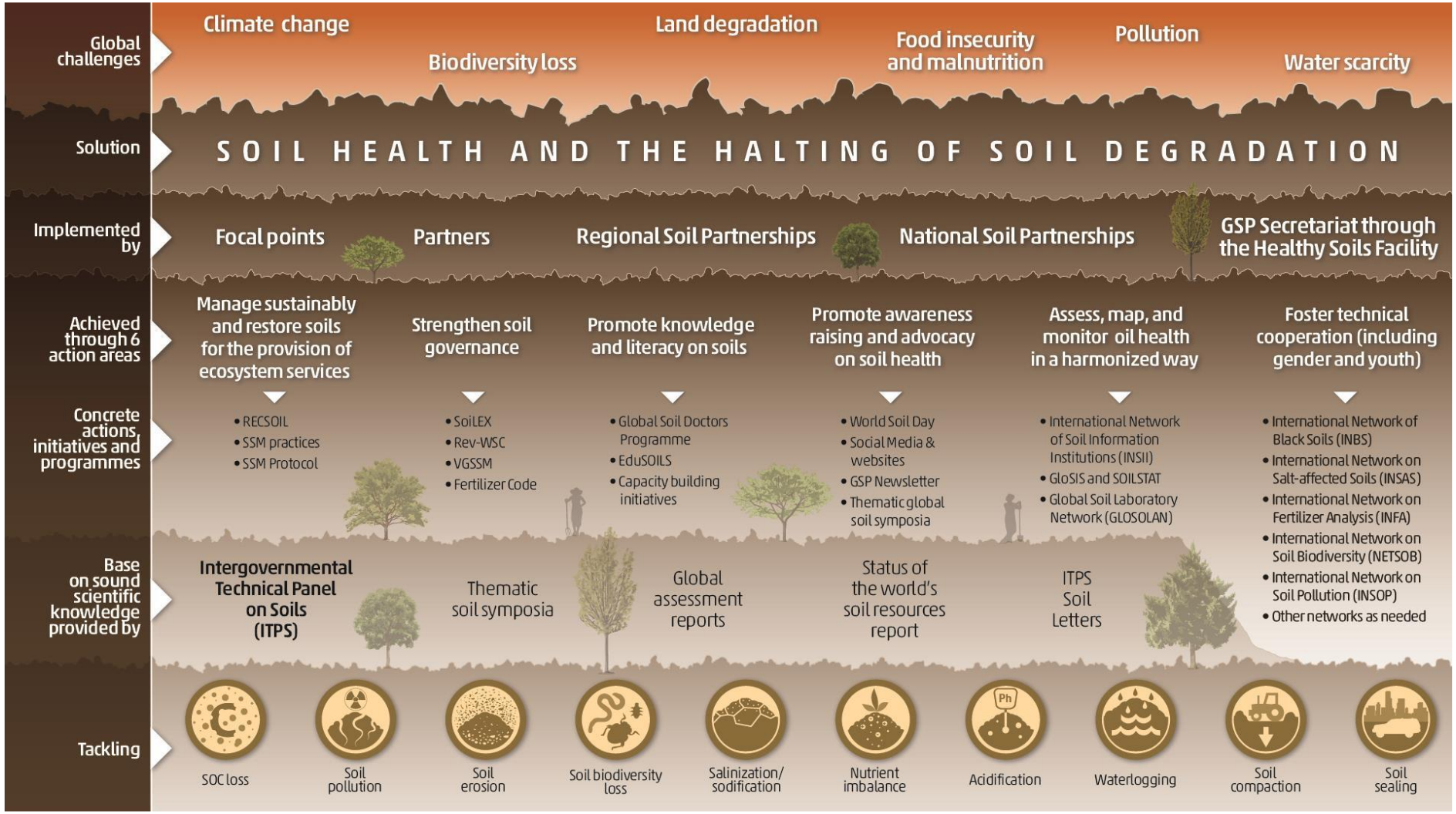
- Potential to mitigate the impacts of climate change with C sequestration and improve food security in the region through land restoration.

- For successful land restoration, WSA built the evidence base (data) and capacity of sustainable soil management (tools, methods, DSM, training, competency model, collaborative learning and experimenting, delivery model).

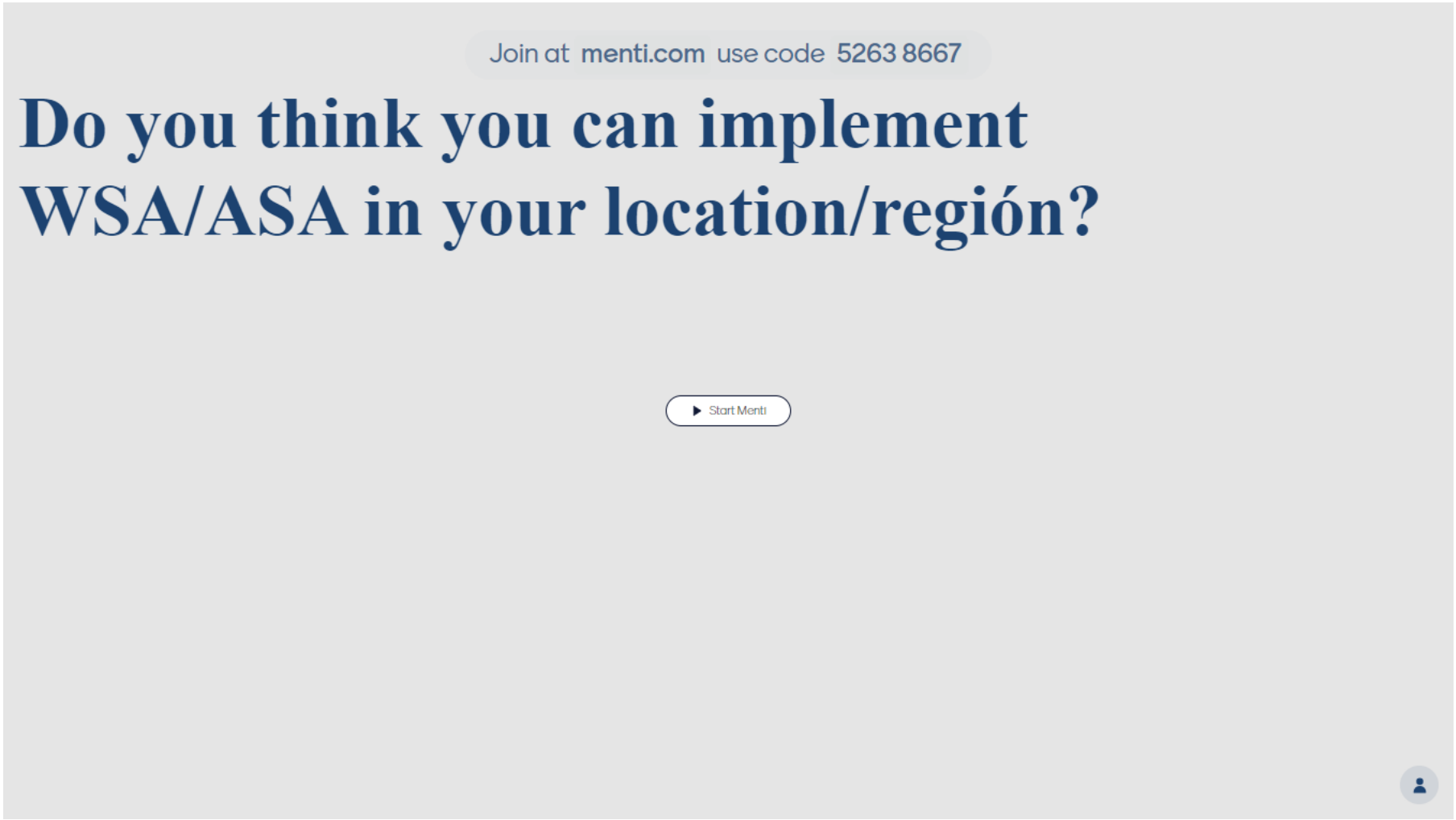
Some thoughts to finalize …

- Have a bold vision and proposal
- Build a strong integrated technical approach and evidence base – close knowledge gaps
- Increased yield ≠ adoption (max. net income and minimize risk)
- Invest heavily in capacity building – thinking vs. copying recipes
- Scale up from the beginning by engaging with others
- Mobilize funds for the vision (not only for your org)

WSA activities and results fit into GSP pillars/action areas



Now it is your turn!


Join at menti.com use code 5263 8667
Do you think you can implement WSA/ASA in your location/región?
Start Menti

Join at menti.com use code 5263 8667

If not, what are the main barriers?

axel.schmidt@crs.org

Special thanks to the
Howard G. Buffett Foundation for their support.

Questions?