

CLIMATE-SMART  
Agriculture  
2015



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## Practices and enabling conditions for CSA: current status in seven countries in Latin America

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# Scope of CSA country profiles

**Objective:** to provide a quick, concise and comparable baseline of the state of CSA across countries of interest to the World Bank

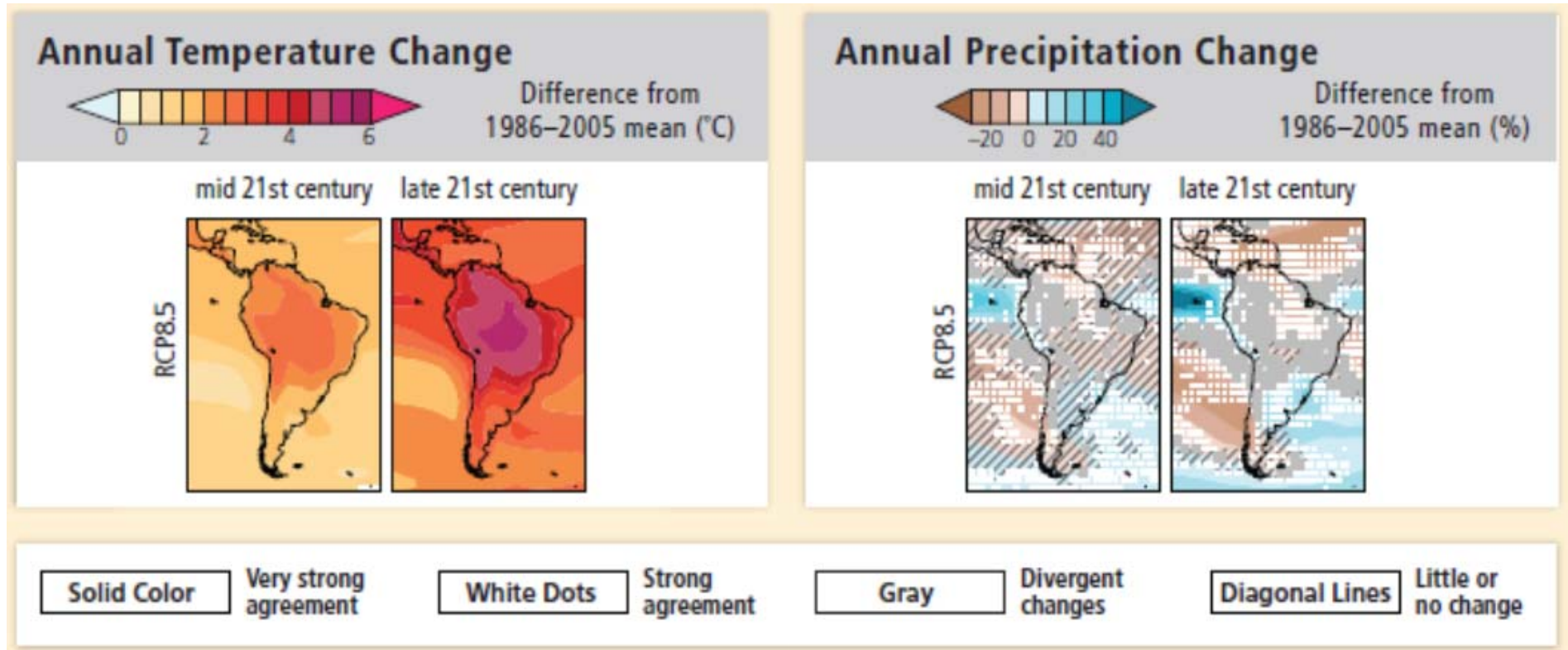
**Methodology:**

- Focus: main production systems and associated farmers
- Interviews, surveys and secondary data reviewed to describe/identify:
  - National agriculture context
  - Climate change impact
  - CSA technologies and practices
  - Institutions and policies for CSA
  - CSA finance options and potential sources
- Not statistically representative



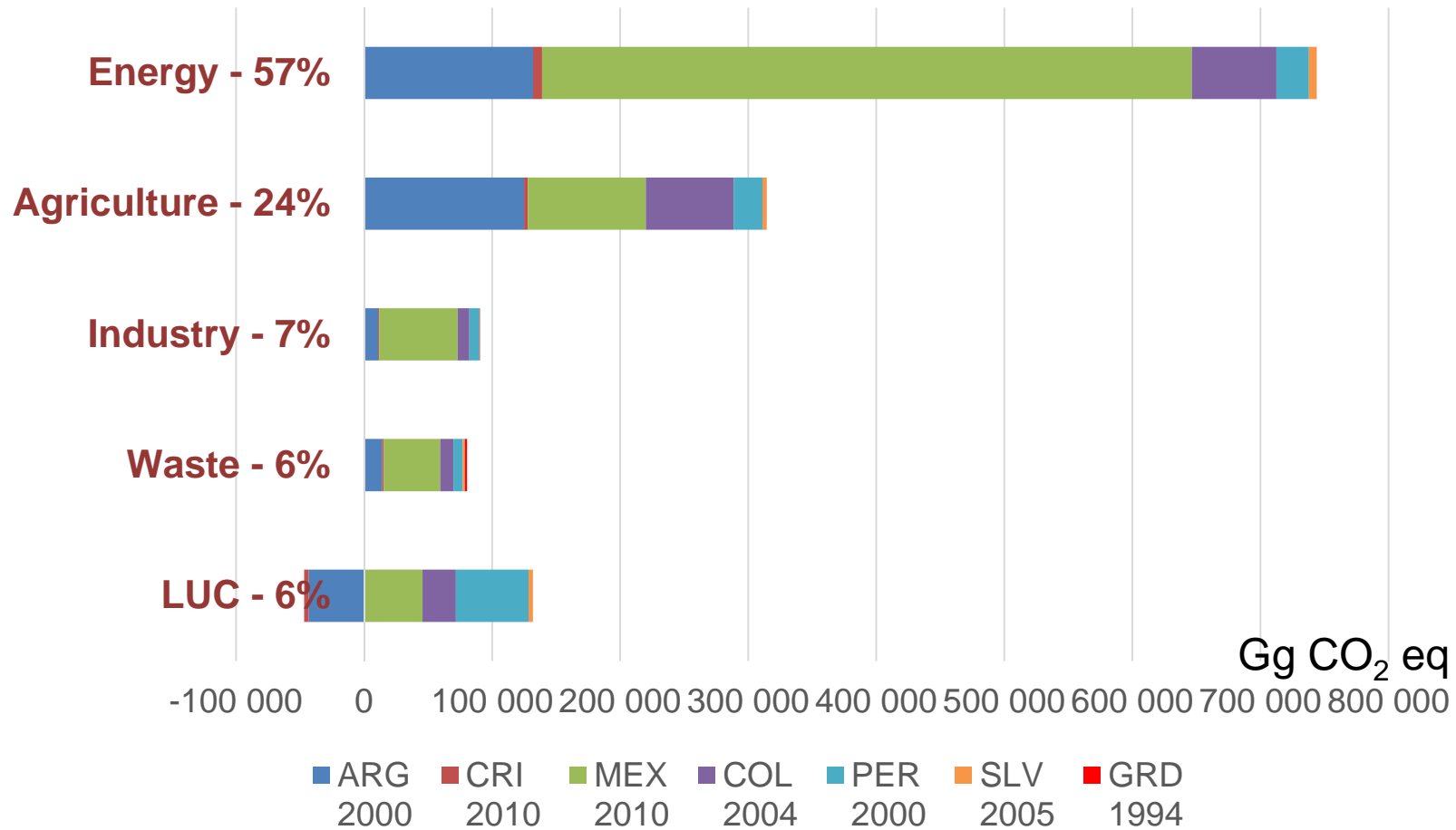
# Exposure to CC

Source: IPCC 2014



# GHG emissions from agriculture

Aggregate GHG emissions and removals by sector by country (Gg CO<sub>2</sub> eq.) for the latest year reported



## Social & economic relevance of agriculture

	ARG	COL	PER	CRI	MEX	SLV	GRD
Agricultural exports (% of total)	53	15	17	36	6	21	3
	Soybeans maize wheat	Coffee Flowers Banana	Coffee Vegetables Asparagus	Banana Pineapple Coffee	Barley beer Tomato Tequila	Coffee Sugar Maize	Nutmeg & cardamom Cocoa Banana
Employment in agriculture (% EAP)	1	7	27	13	13	21	13
Income per capita (current US\$)	12,073	5,817	5,292	8,650	8,095	3,433	ND
Importance or agriculture for food security/ sovereignty	Self-sufficient	Growing self-sufficiency	Growing self-sufficiency	Growing dependency on imports (basic grains)	Growing dependency on imports (basic grains)	Growing dependency on imports (Maize, meat and dairy products)	Highly dependent on imports

# questions ...

- Of the ongoing agriculture practices, which are considered climate-smart?

 Water smart

- What is their degree of adoption?

 CO<sub>2</sub> Carbon smart

- What CSA practices are most promising?

 NO<sub>2</sub> Nitrogen smart

- What are the political and institutional constraints and opportunities for their dissemination and long term viability?

 Energy smart

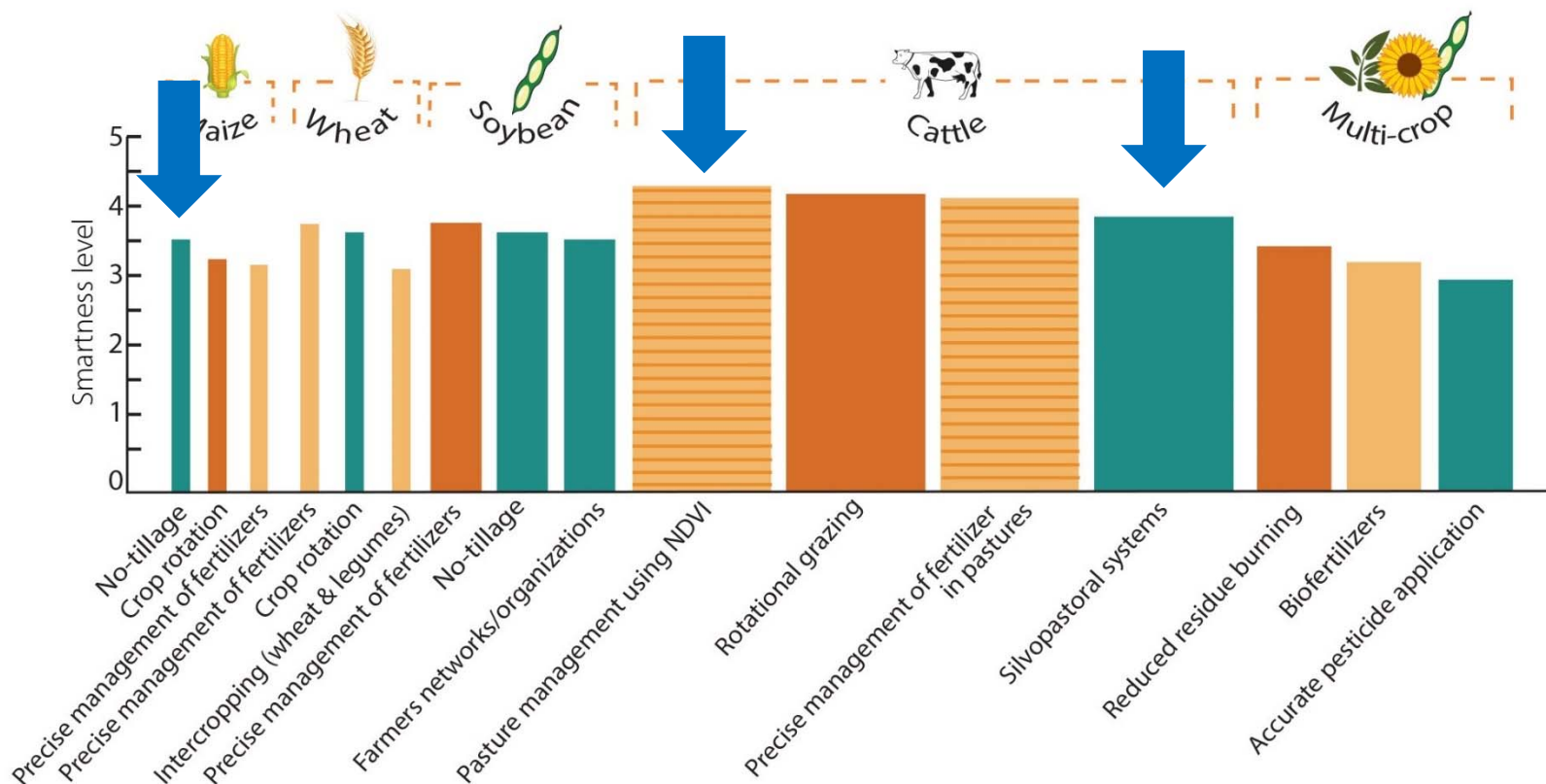
 Weather smart

 Knowledge smart

## How smart are CSA practices? What is their degree of adoption?

### Smartest practices for each production system

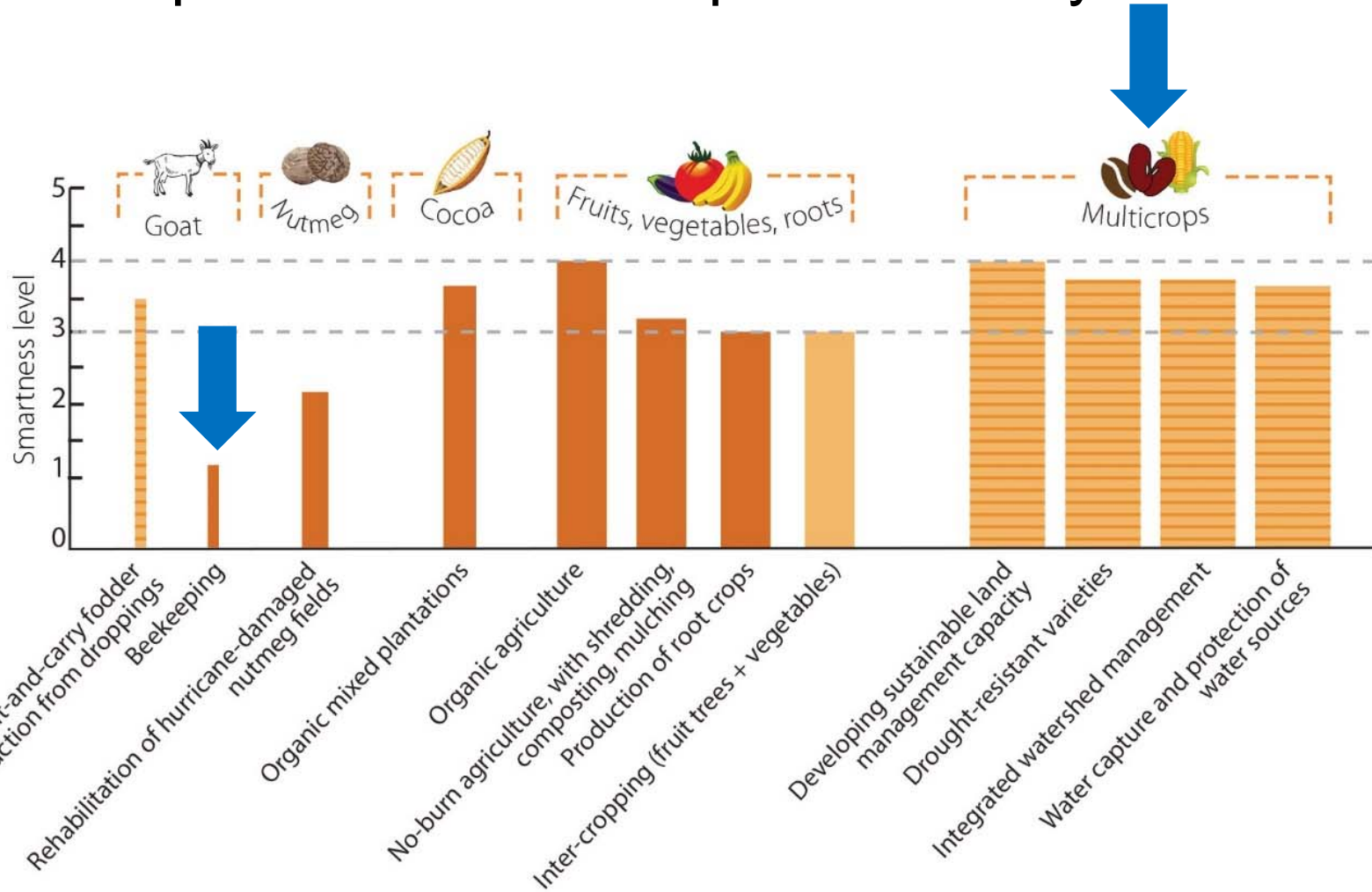
#### Argentina



How smart are CS practices?  
What is their degree of adoption?

Selected practices for each production system

Grenada



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# A typology of CSA practices



Multi-purpose



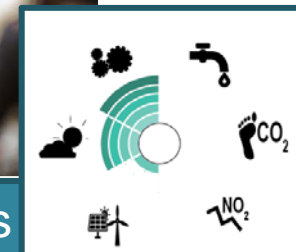
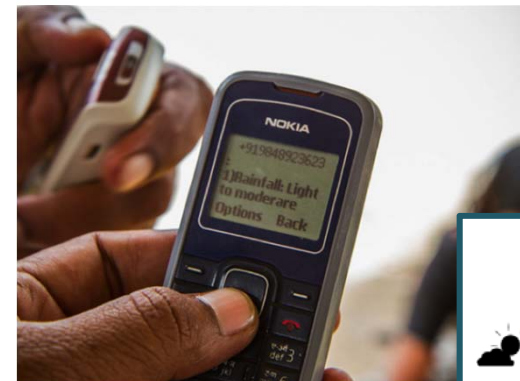
Climate variability



Water scarcity



Soil fertility



Emergent practices

# Common challenges for wider CSA implementation ...

Resources	Elements
Natural capital	<ul style="list-style-type: none"><li>• Land tenure and distribution – sowing pools</li><li>• Access to water</li><li>• Patterns of land use</li></ul>
Knowledge	<ul style="list-style-type: none"><li>• R&amp;D to identify and validate CSA techniques tailored to local contexts</li><li>• Knowledge sharing networks</li><li>• Integrated Decision Support Systems</li></ul>
Finance	<ul style="list-style-type: none"><li>• Credits</li><li>• Agriculture insurance</li></ul>
Institutions	<ul style="list-style-type: none"><li>• Farmers organizations and associated local institutions</li></ul>
Policy	<ul style="list-style-type: none"><li>• Inter-sectorial dialogue</li><li>• Short-term visioning &amp; long-term planning</li><li>• Bottom up feedback</li><li>• Low emissions / adaptation development policies</li></ul>

# ... and some encouraging examples

Case	Achievements	Joint effort for	Stakeholders
Organic cocoa plantations, Grenada	Increased resilience to tropical storms & droughts Products diversification	Market access	Cocoa farmers cooperative + export company + German certification company
Innovation hubs for conservation agriculture, Mexico	Near 37,000 ha with higher productivity and lower input costs	Knowledge generation and dissemination	government, private sector and research institutions
Water harvesting, Peru	Recharged aquifers Improved production (livestock and orchards)	Knowledge dissemination	Local NGO + local organizations + Andean governments
Meteorological Observatory, El Salvador	Network for observation and distribution of agro-climatic information	Climate monitoring	National and local governments
Market incentives for conserve Patagonia s grasslands, Argentina	Management and conservation plans 6 million hectares of pastures certification (by 2018),	Market access	Outdoor clothing company, an international NGO for conservation and a regional sheep farmers association

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# Thanks!



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You can find the profiles in both English and Spanish and all supplemental materials at:

<http://dapa.ciat.cgiar.org/CSA-profiles/>

and on the **WB Climate Change Knowledge Portal**

