

# Climate-smart Cocoa

## Mainstream or Niche?

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## Discussion points:

1. What is climate-friendly cocoa? What is climate-smart cocoa?
2. Is all cocoa vulnerable to climate change?
3. Can cocoa help mitigate climate change?
4. Is climate-friendly cocoa production compatible with intensification and yield increase?
5. Should all cocoa become climate-smart and/or climate-friendly?



# 1. What is climate-friendly cocoa? What is climate-smart cocoa?

Cocoa production systems that store or sequester relatively large amounts of carbon and avoid unnecessary greenhouse gas emissions are “climate-friendly”.

Climate-smart cocoa is grown in such a way that the production system

- (i) contributes to reducing (mitigating) climate change (is climate-friendly) and
- (ii) is progressively adapted to a changing climate, thereby reducing the climate change vulnerability of the household and the supply chain.

(climate-friendly is a component of climate-smart)

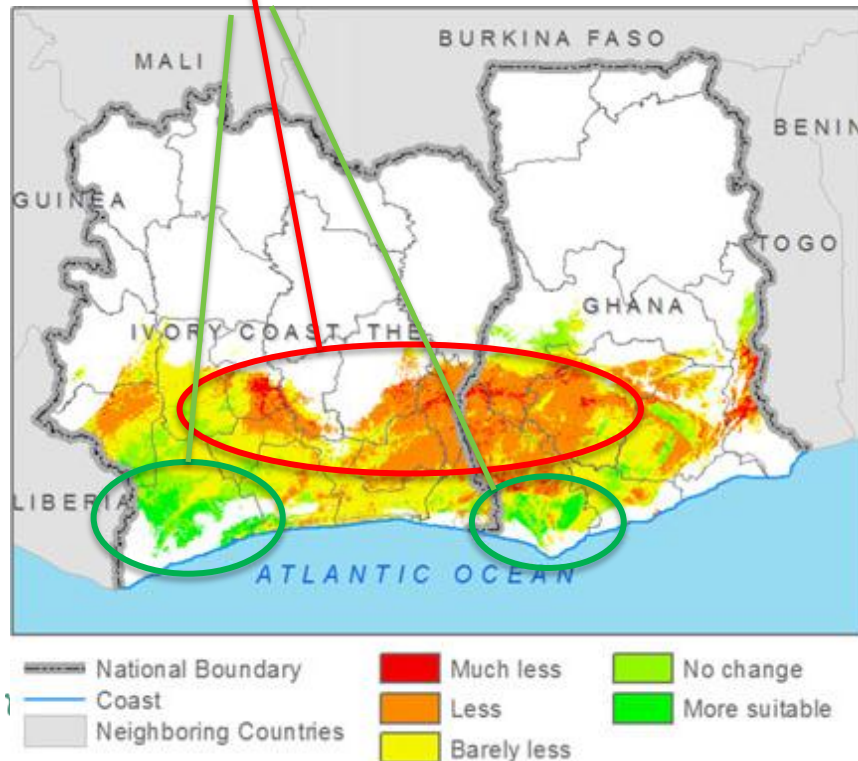


## 2. Is all cocoa vulnerable to climate change?

In principle yes, but not everywhere to the same extent and with the same consequences.

Over the next generation of cocoa farmers, the climatic suitability for cocoa in West Africa is predicted to

- **decrease** in most regions
- **increase** in some, possibly increasing land conflicts.



=> Adaptation to climate change is necessary (almost) everywhere, but strategies must be locally specific

*Predicted change in climatic suitability for cocoa between present and 2050*

*From: Läderach, Martinez, Schroth, Castro 2013*

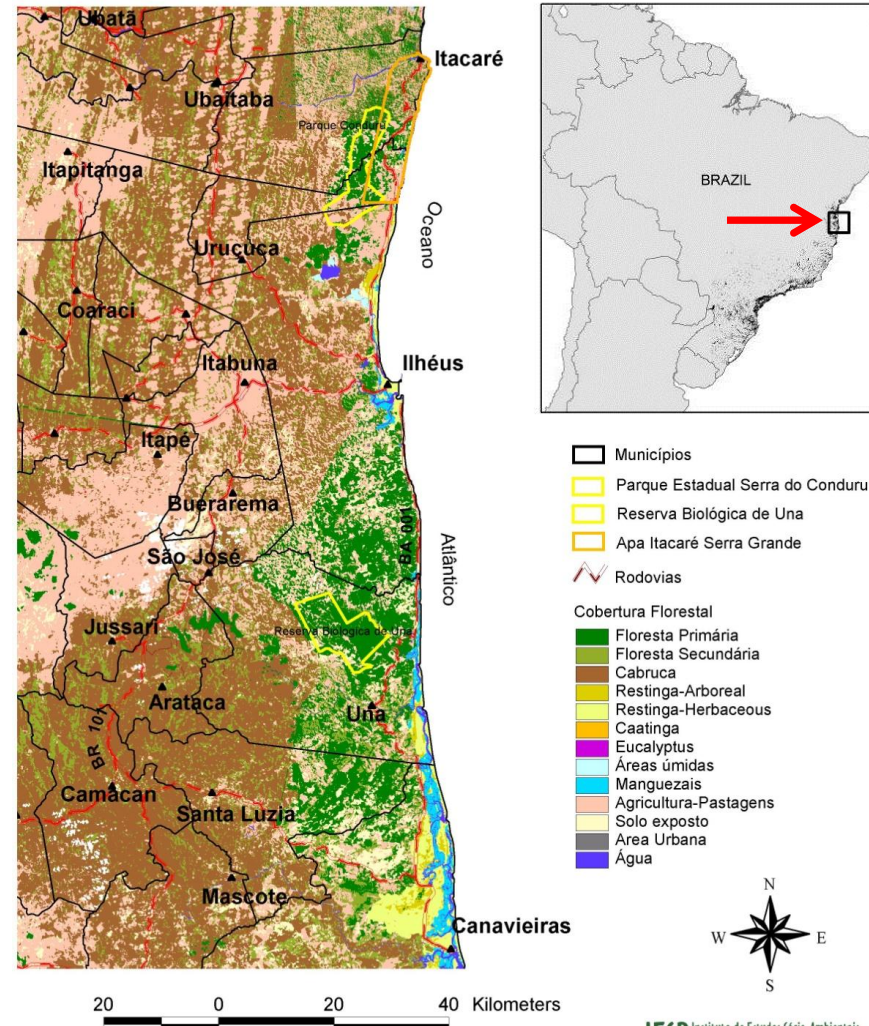


### 3. Can cocoa can help mitigate climate change?

Yes, it can. In southern Bahia, Brazil's main cocoa region, 59% of the total tree biomass (and carbon) are in shade cocoa systems, as compared to 32% in forest and 9% in fallows. Cocoa farms have less carbon per hectare than forest, but they cover a larger area!



### Cocoa region of Bahia, Brazil



## 4. Is climate-friendly cocoa production compatible with intensification and yield increase?

This is a complex question and the answer is a conditional yes – as long as carbon stocks (and shade) do not become excessive.

Unpublished data from Brazil suggest that the cocoa output of southern Bahia could at least be doubled while conserving or increasing carbon stocks in large trees in cocoa farms to a fairly high 65 t/ha.

Almost the entire carbon is stored in large (and tall) trees.

It is better – for climate and cocoa – to conserve (or grow) a few large trees per hectare than many smaller trees!



*Tree on cocoa farm in Ghana*

## 5. Should all cocoa become climate-smart and/or climate-friendly?

Eventually yes, because all cocoa is under some form of (direct or indirect) threat from climate change, and all cocoa can make some contribution to climate change mitigation. But the urgency and opportunities are not everywhere the same.

Developing and implementing locally specific adaptation plans is particularly important in **West Africa**, where opportunities for carbon sequestration in cocoa farms are also very significant.

**Brazil**, on the other hand, has excellent opportunities to put a special “climate-friendly cocoa” on the market.

Key for any country that wants to engage in a “climate-friendly cocoa” market is a very clear, sector-wide commitment to **zero-deforestation**.



