

Presentation given at the Katoomba XV Meeting entitled

Integrated Solutions: Water, Biodiversity and Terrestrial Carbon in West Africa

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Accra, Ghana

Hosted by:

The Katoomba Group, Forest Trends,
and the Nature Conservation Research Center



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Exploring the potential for *cocoa* *carbon* in Ghana



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**University of
Reading**

Biodiversity Conservation and the Millennium Development Goals

Sachs *et al.* (2009)

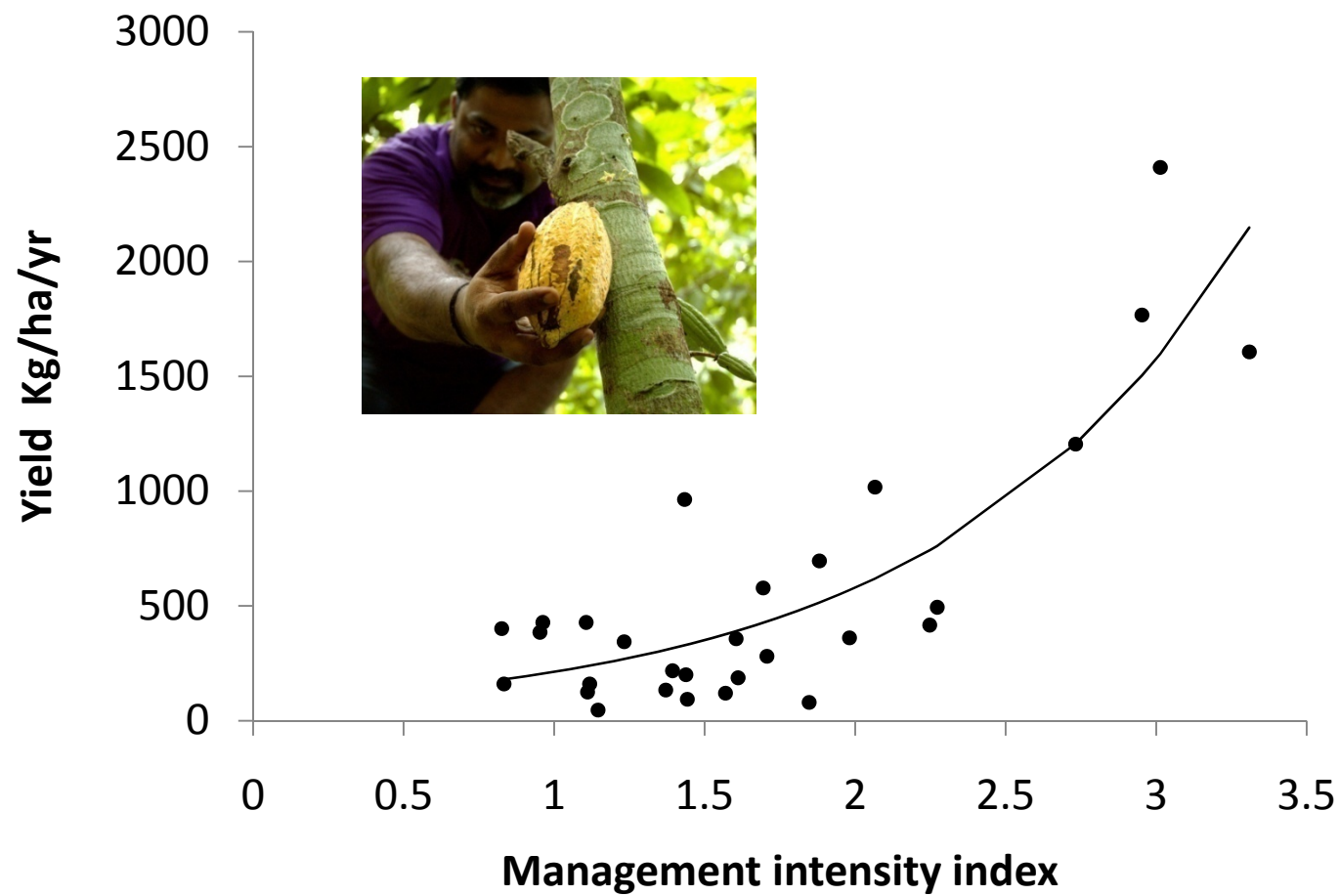
“we need further integration of the poverty alleviation and biodiversity conservation agendas”

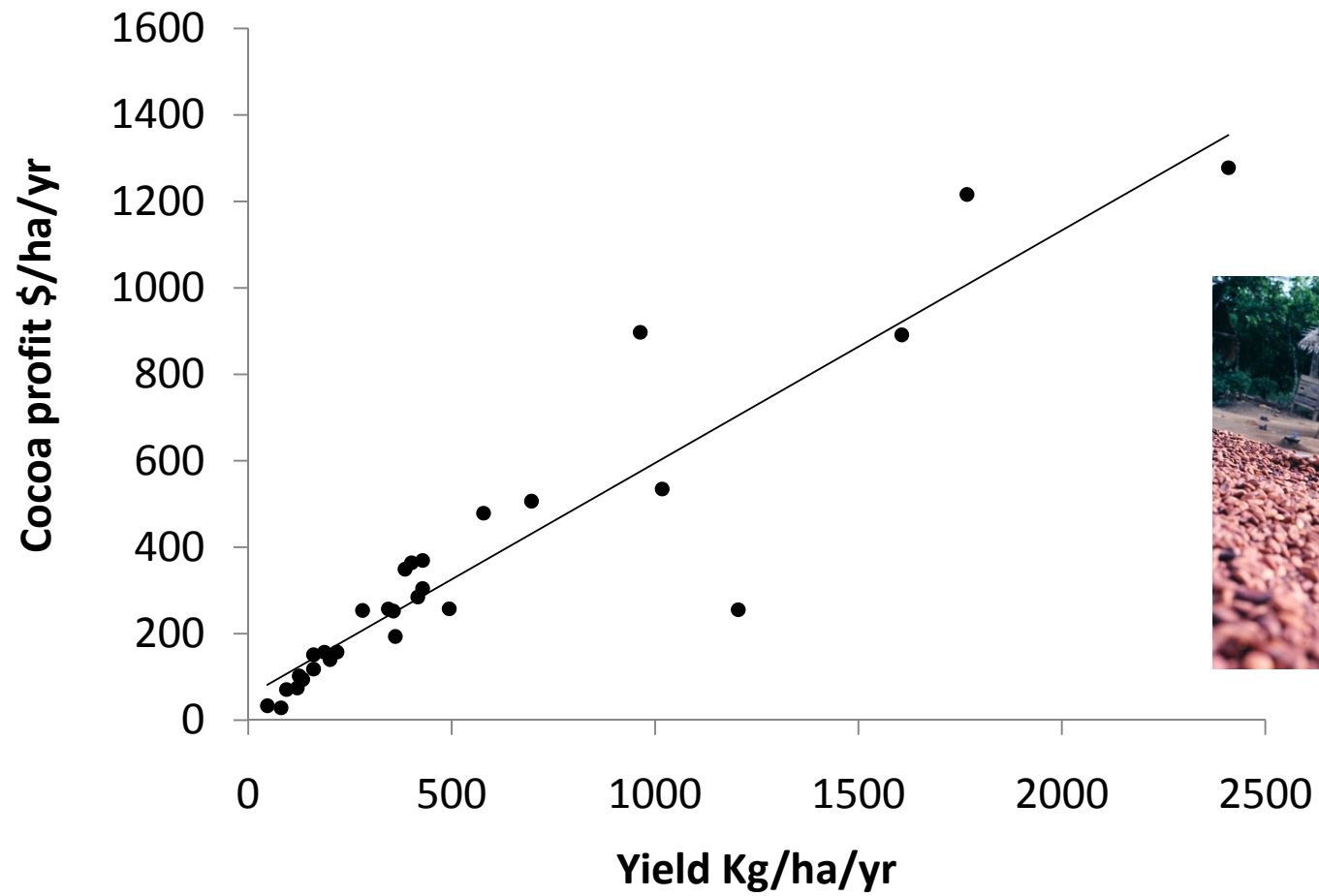
Science, September 2009

What is the potential for cocoa farming systems in Ghana to engage with and benefit from this integrated agenda?



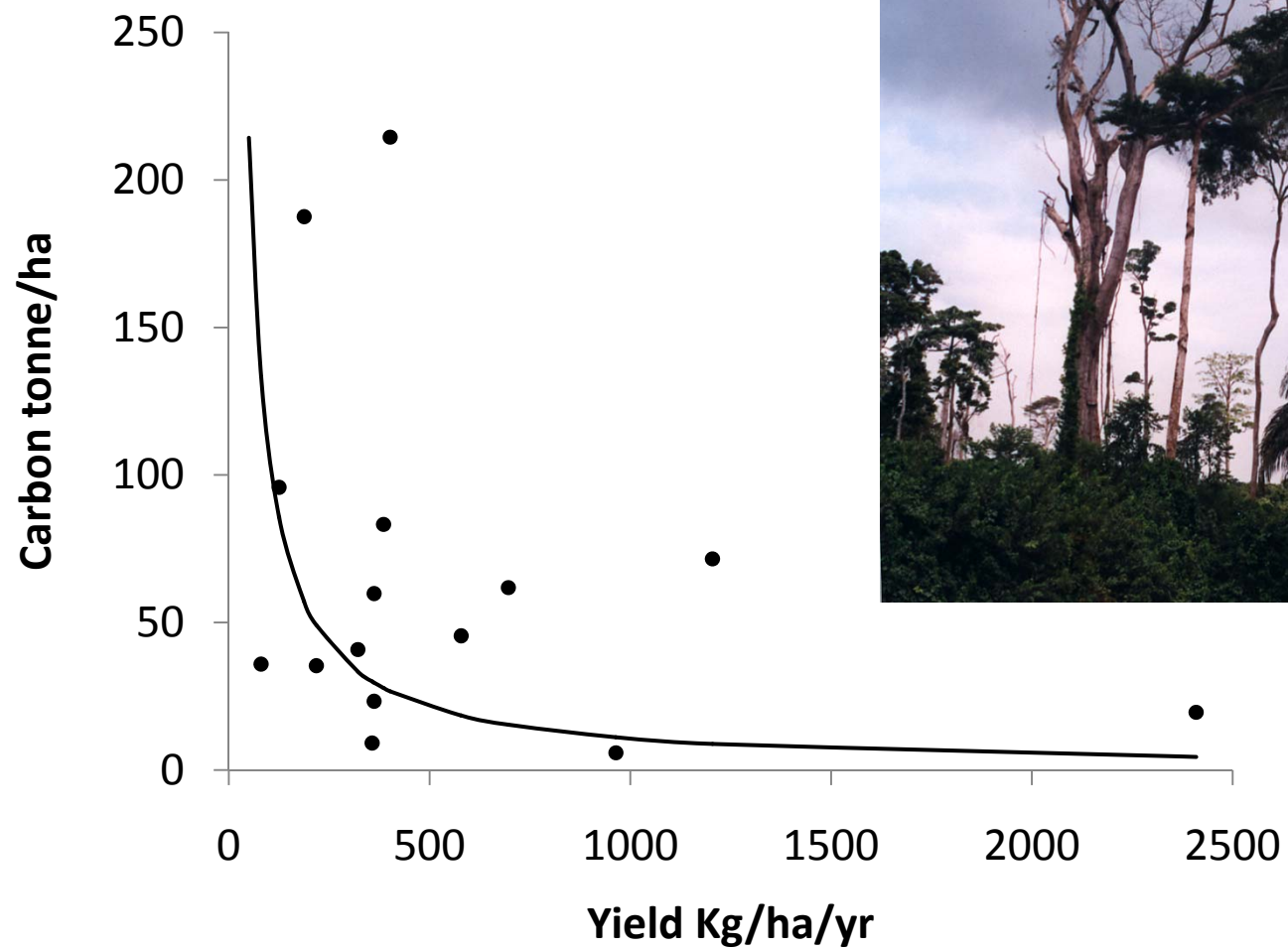
The main problem.....

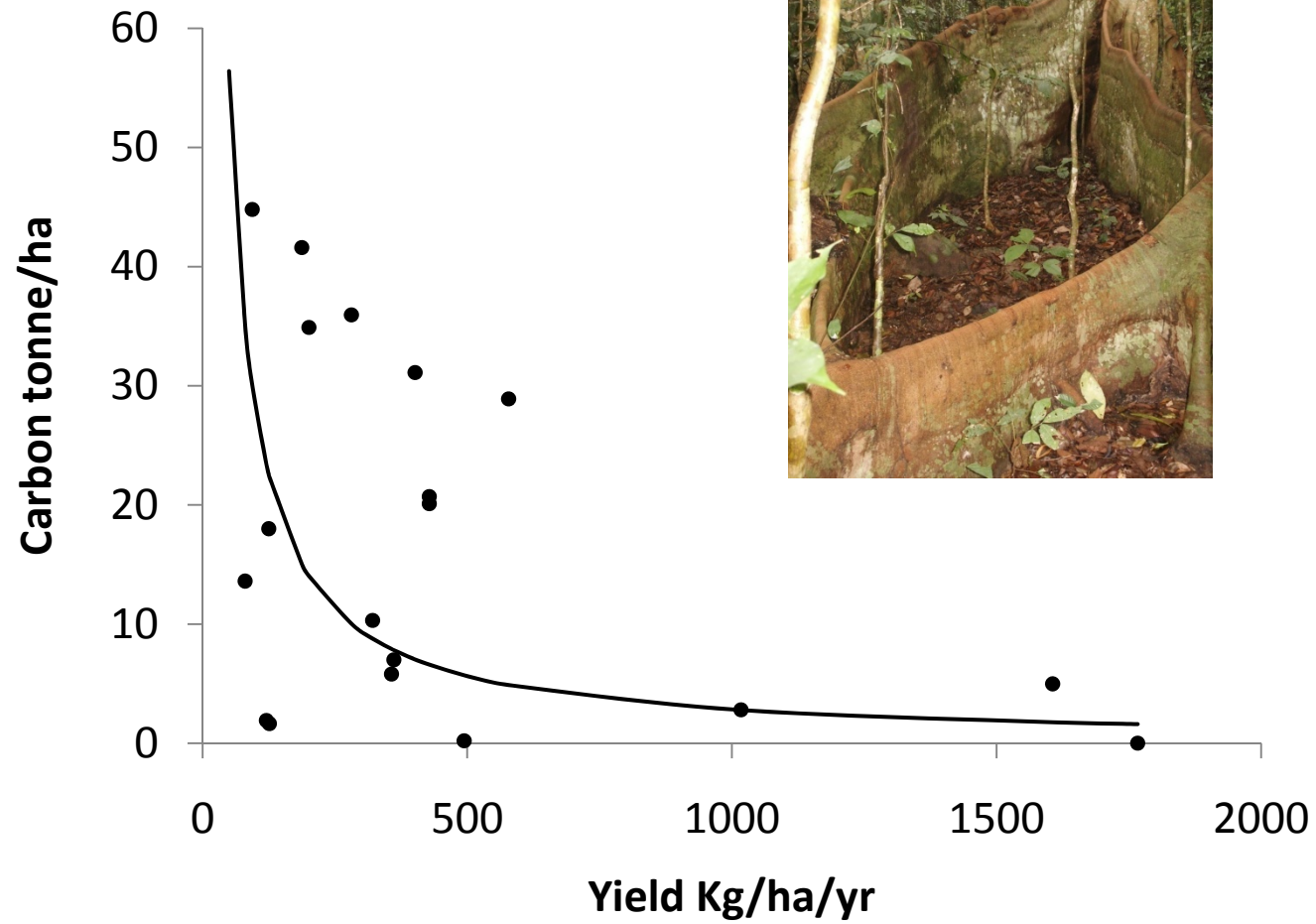




Rural livelihoods can be improved by increasing yields

- *Knowledge*
- *Knowledge transfer*
- *Institutional support*





Increasing yields causes ecosystem degradation

- *Loss of biodiversity*
- *Reduction in ecosystem services*
- *Undermines the long-term sustainability of the farming system*

Payments for ecosystem services might change this process

- *Climate change and Carbon trading*

How might this affect cocoa farmers in Ghana?

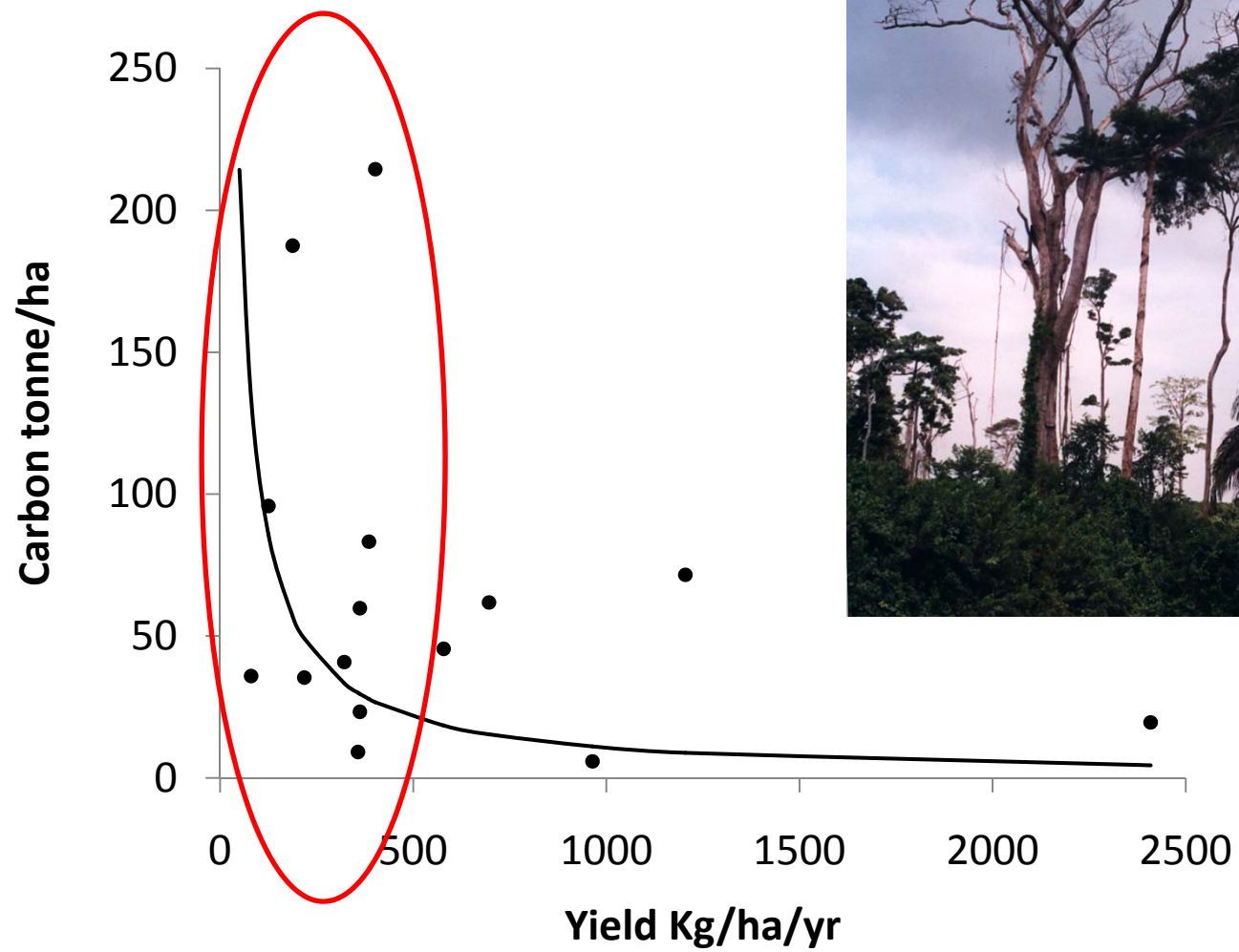
Without Carbon payments

Net Farm Income	Number of Farms	%
\$0-1.25/day	12	38.7
\$1.25-2/day	11	35.5
>\$2/day	8	25.8

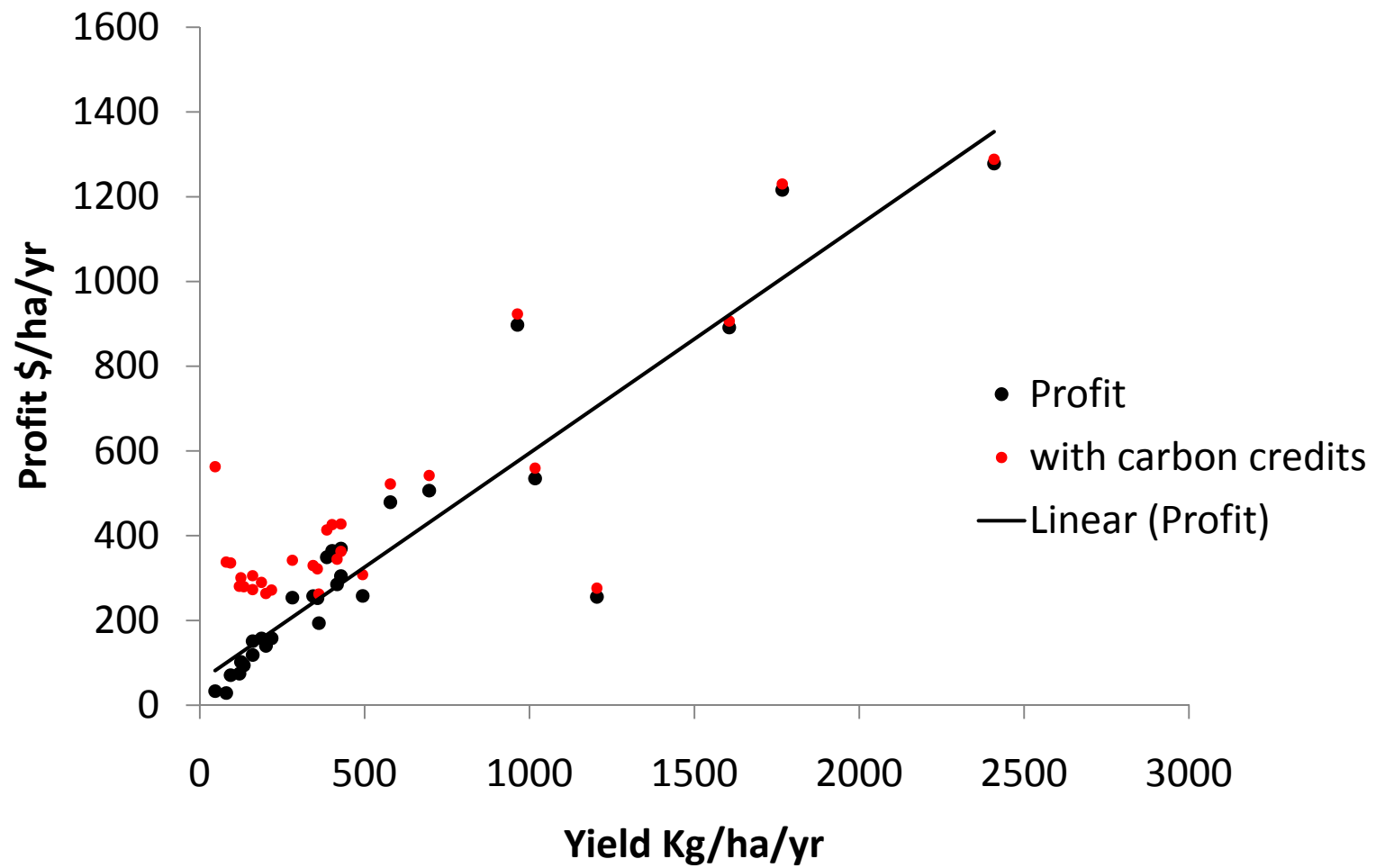
With Carbon payments¹

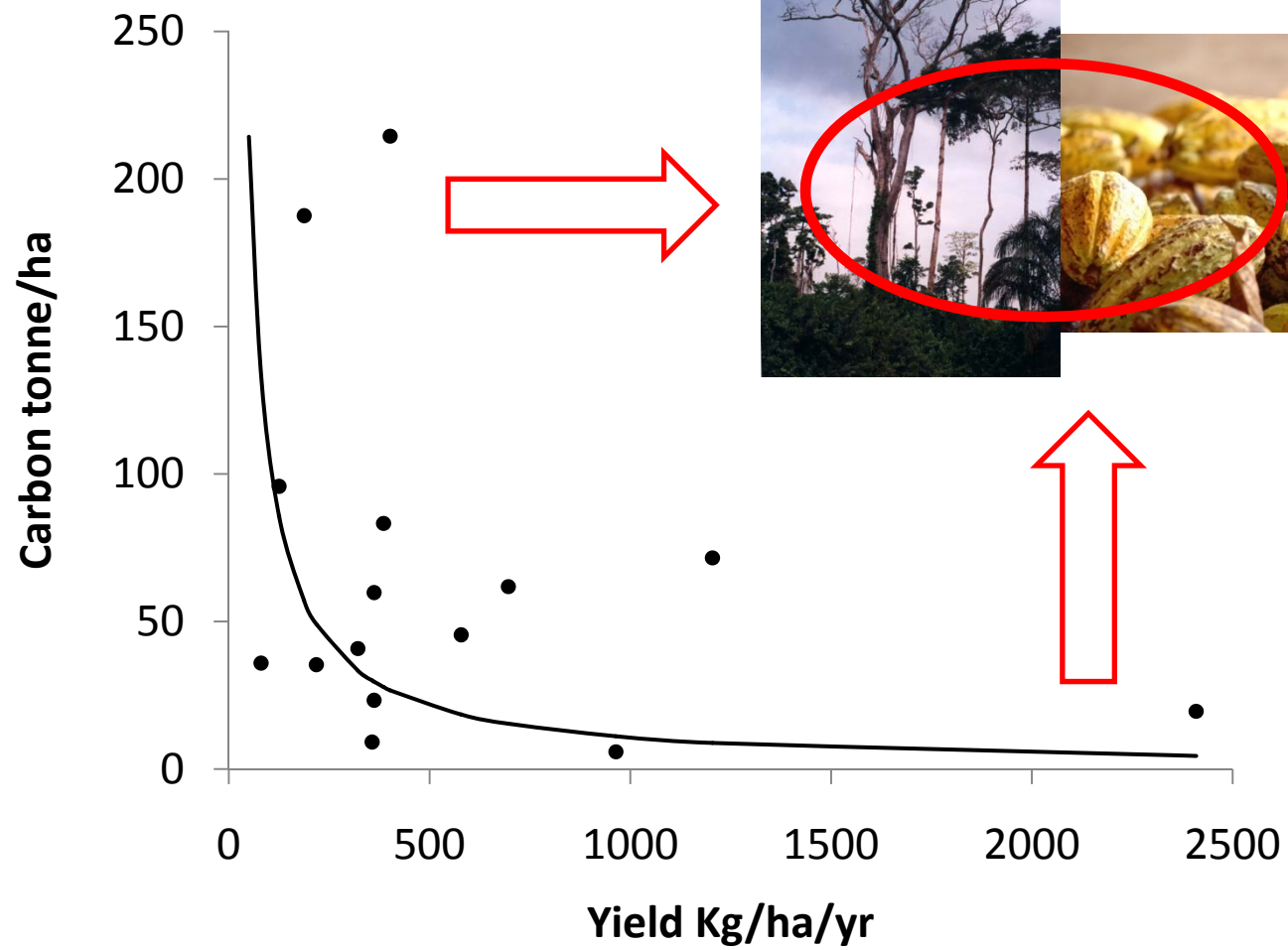
Net Farm Income	Number of Farms	%
\$0-1.25/day	6	19.4
\$1.25-2/day	7	22.6
>\$2/day	18	58.1

¹There are significant uncertainties in these figures!!



Payments for ecosystem services
could benefit the poor





Uncertainties are large.....

- *Carbon cycling in cocoa farming systems*
- *Types of carbon project (e.g. REDD, AF)*
- *Socio-economics*
 - *international markets*
 - *impact on rural livelihoods*
- *Policy and societal support structures*

Nevertheless.....

- *Cocoa farming systems in Ghana support biodiversity and ecosystem services*
- *Potential to generate payments for these and improve rural livelihoods*
- *Improve productivity in cocoa farming systems of high biodiversity and ecosystem service value through integrated agricultural and environmental research*

The potential benefits to cocoa farming in Ghana arising from integrating the conservation and development agendas are significant

Many thanks for your attention!