

TESTING THE IMPACT OF THE RSPO ON IMPROVING BIODIVERSITY CONSERVATION IN OIL PALM PLANTATIONS

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INCLUSIVITY AND ACCOUNTABILITY



Important questions...

We investigated the impact of RSPO membership on avoiding biodiversity losses, by looking at the role of High Conservation Value (HCV) areas:

Question 1.

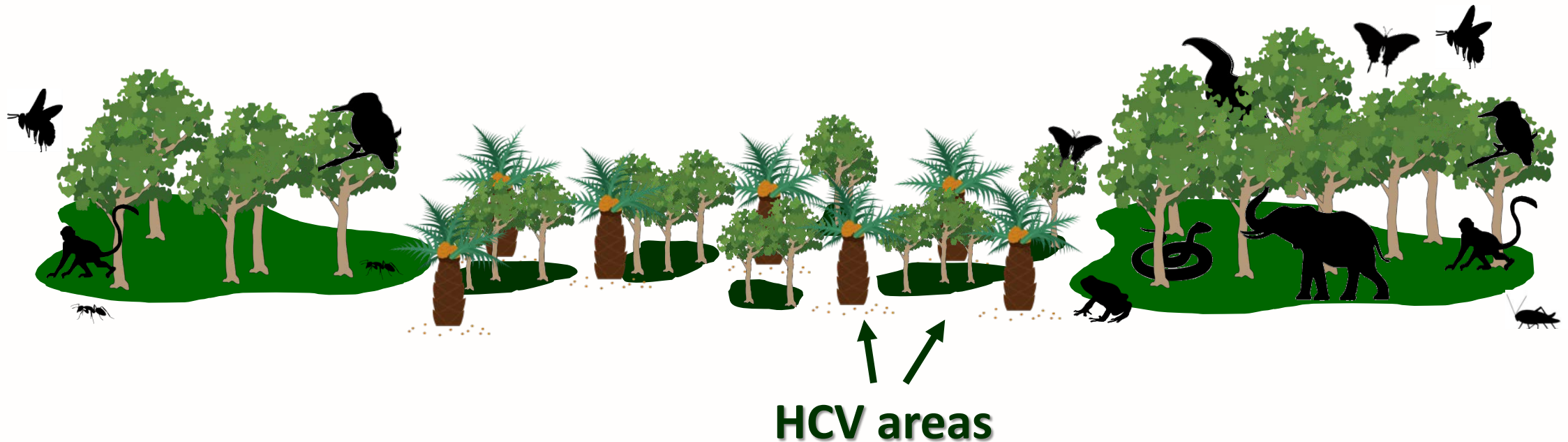
Are HCV areas large enough and of good enough quality to support biodiversity?

Question 2.

Do HCV areas improve connectivity in oil palm landscapes?

Important questions...

We investigated the impact of RSPO membership on avoiding biodiversity losses, by looking at the role of High Conservation Value (HCV) areas:



Previous research



BIODIVERSITY

Viable Forest Patch Size for Conservation Set-Asides in Oil Palm Landscapes

Forest patches with a 'core area' of >200 ha could support 60-70% of biodiversity in continuous forest

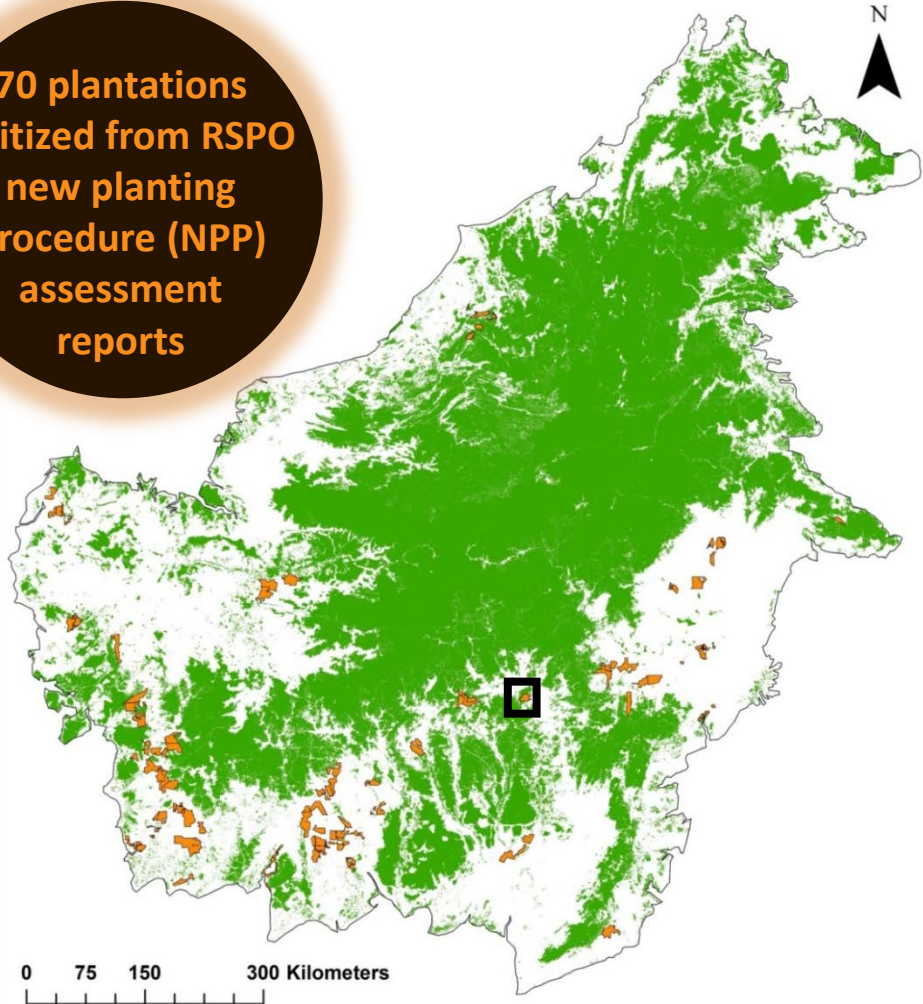
Higher quality forest could also improve levels of species richness in forest patches



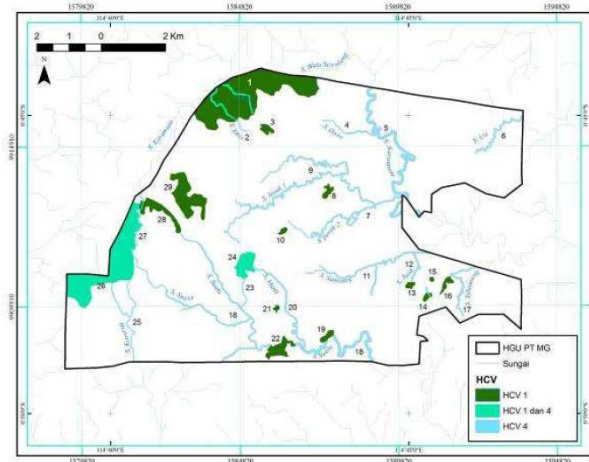
Landscape connectivity is also important for biodiversity, but little is known about the connectivity benefits of HCV areas

HCV area digitization

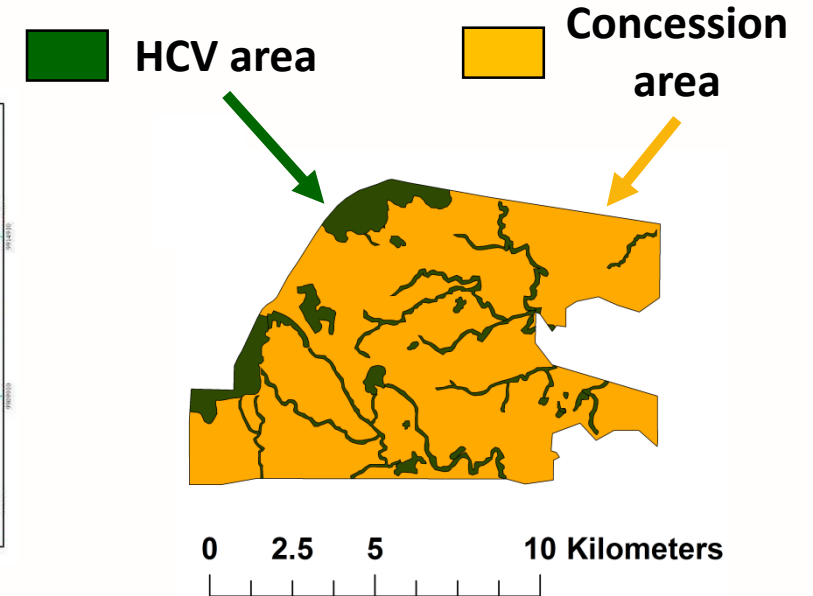
70 plantations digitized from RSPO new planting procedure (NPP) assessment reports



Forest cover from Gaveau *et al.* 2016. *Sci. Rep.* 6:32017



NPP assessment maps extracted from PDFs



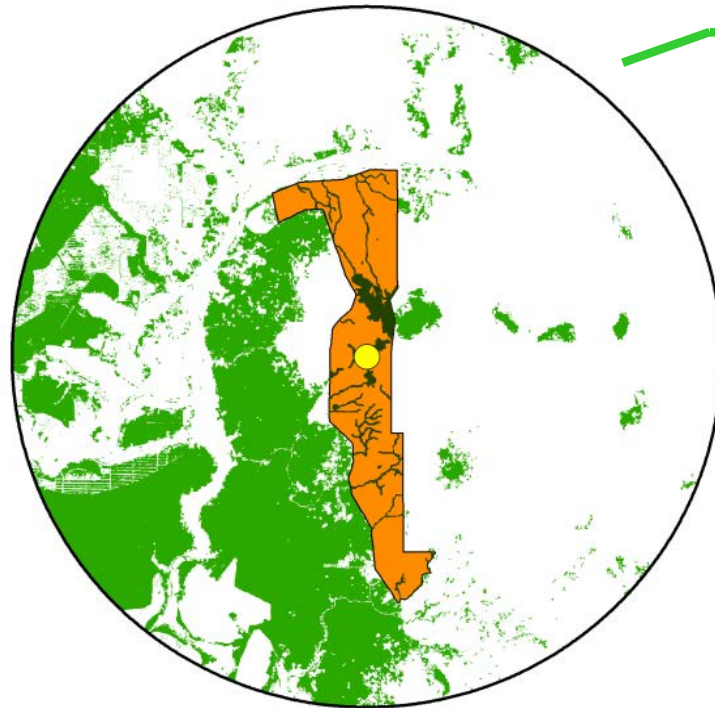
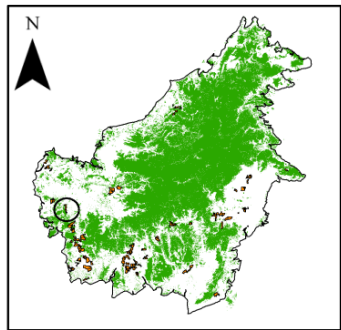
NPP assessment maps then digitized



Connectivity modelling

Example plantation 'landscape':

- Centroid
- HCV area
- Focal NPP assessment plantation
- Surrounding forest cover



Ran computer models representing different types of 'species'



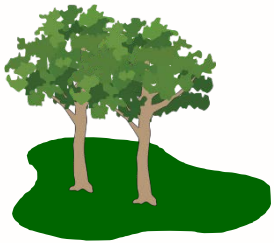
Ran computer models for three HCV area forest cover treatments:

1. No forest cover = no RSPO intervention
2. Current forest cover = current impact of RSPO
3. Fully reforested = potential impact of RSPO

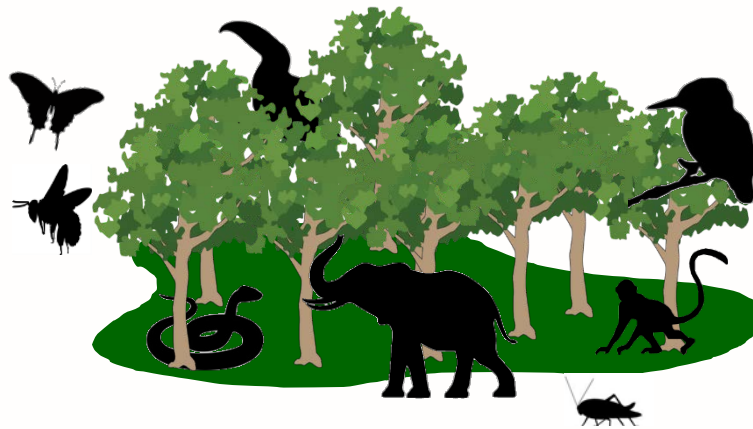


HCV area size and quality

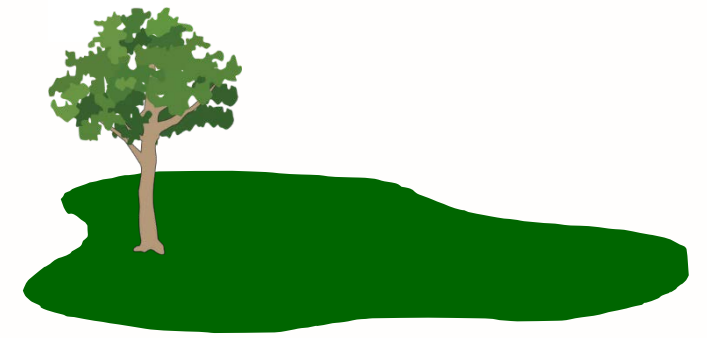
Question 1. Are HCV areas large enough and of good enough quality to support biodiversity?



HCV areas are generally small (~120 ha on average across plantations)



Almost half of all plantations contain at least one large HCV patch (core area >200 ha)

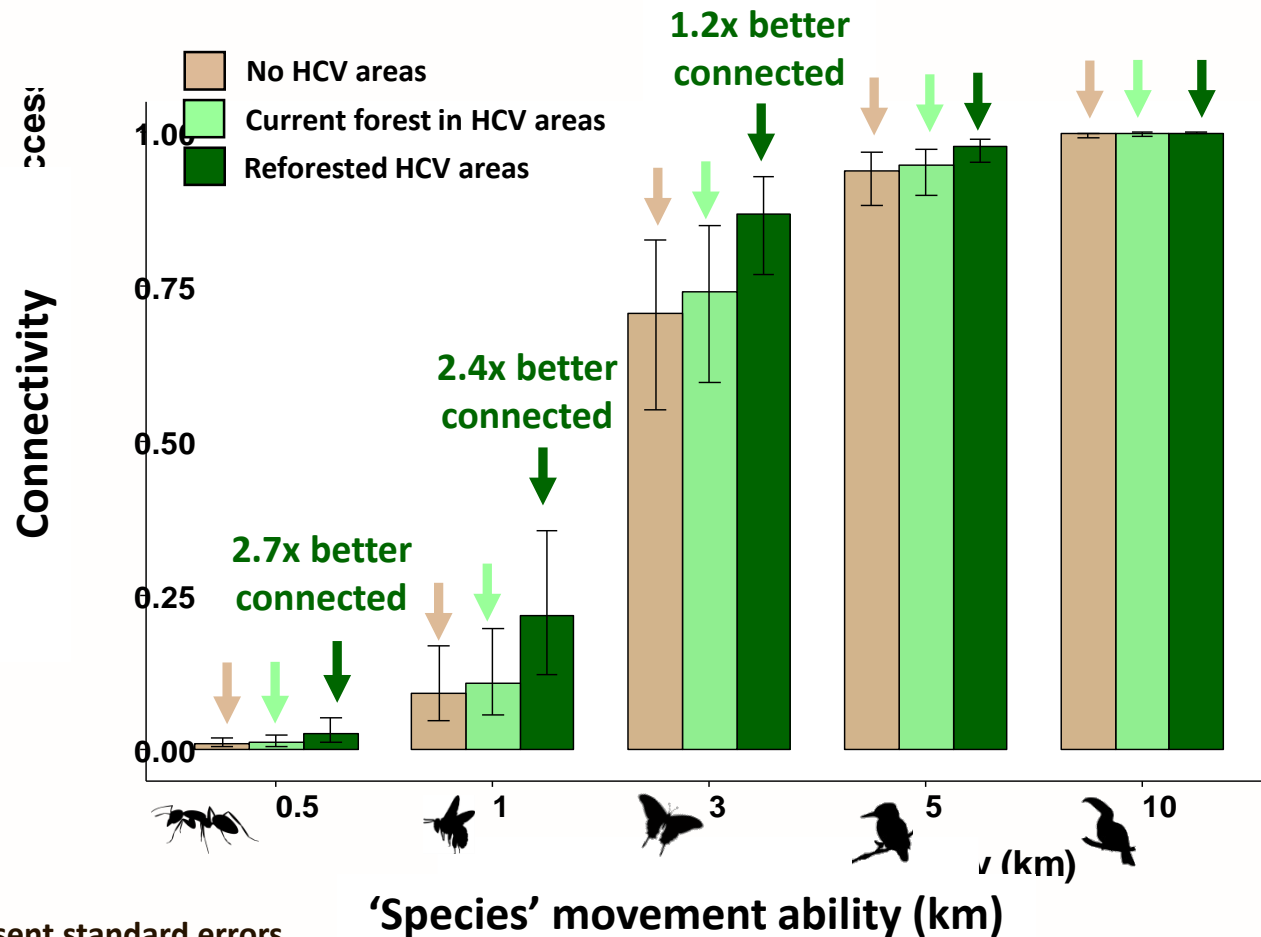


HCV areas currently contain little intact-forest according to recent satellite data (~21%)



Connectivity of HCV areas

Question 2. Do HCV areas improve connectivity in oil palm landscapes?



At present, there are few connectivity benefits of HCV areas

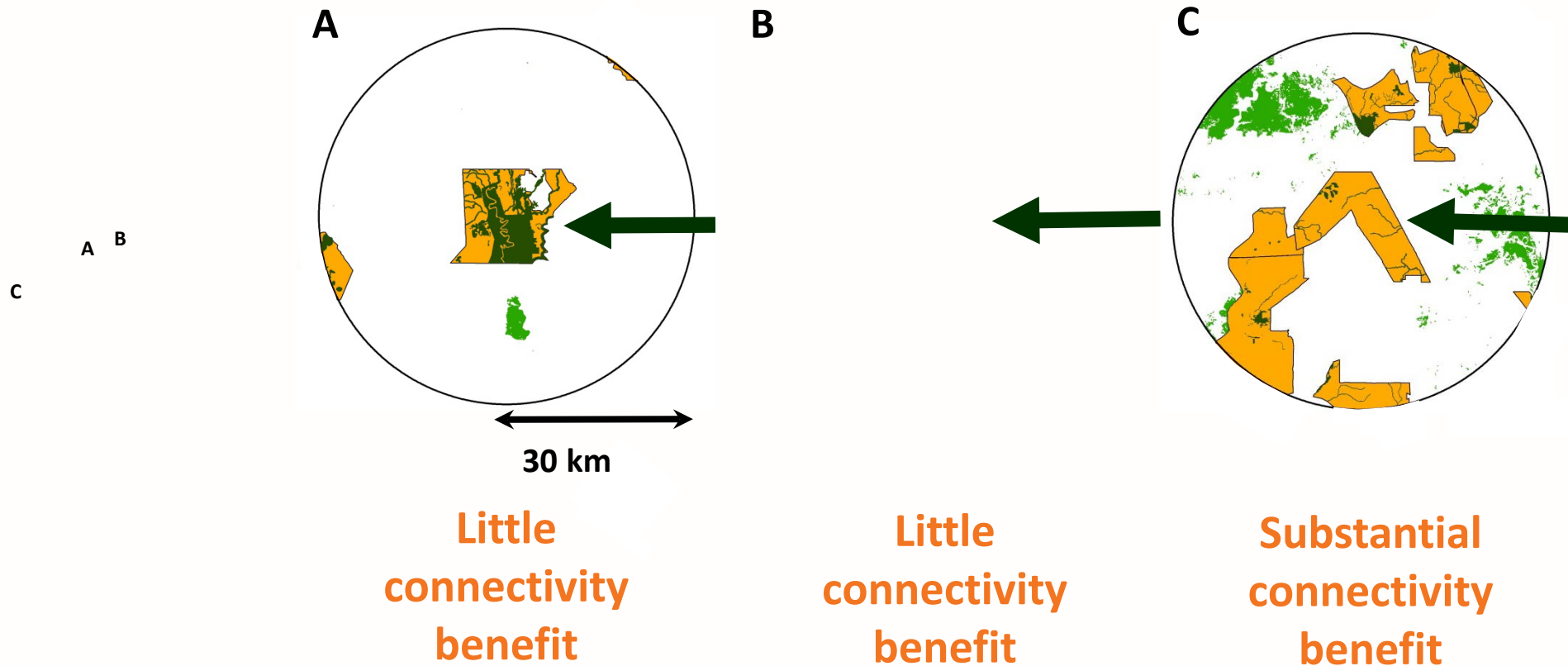
...but HCV areas have the potential to improve connectivity if reforested



*Bars represent standard errors

Connectivity of HCV areas

Question 2. Do HCV areas improve connectivity in oil palm landscapes?



Recommendations

Question 1.

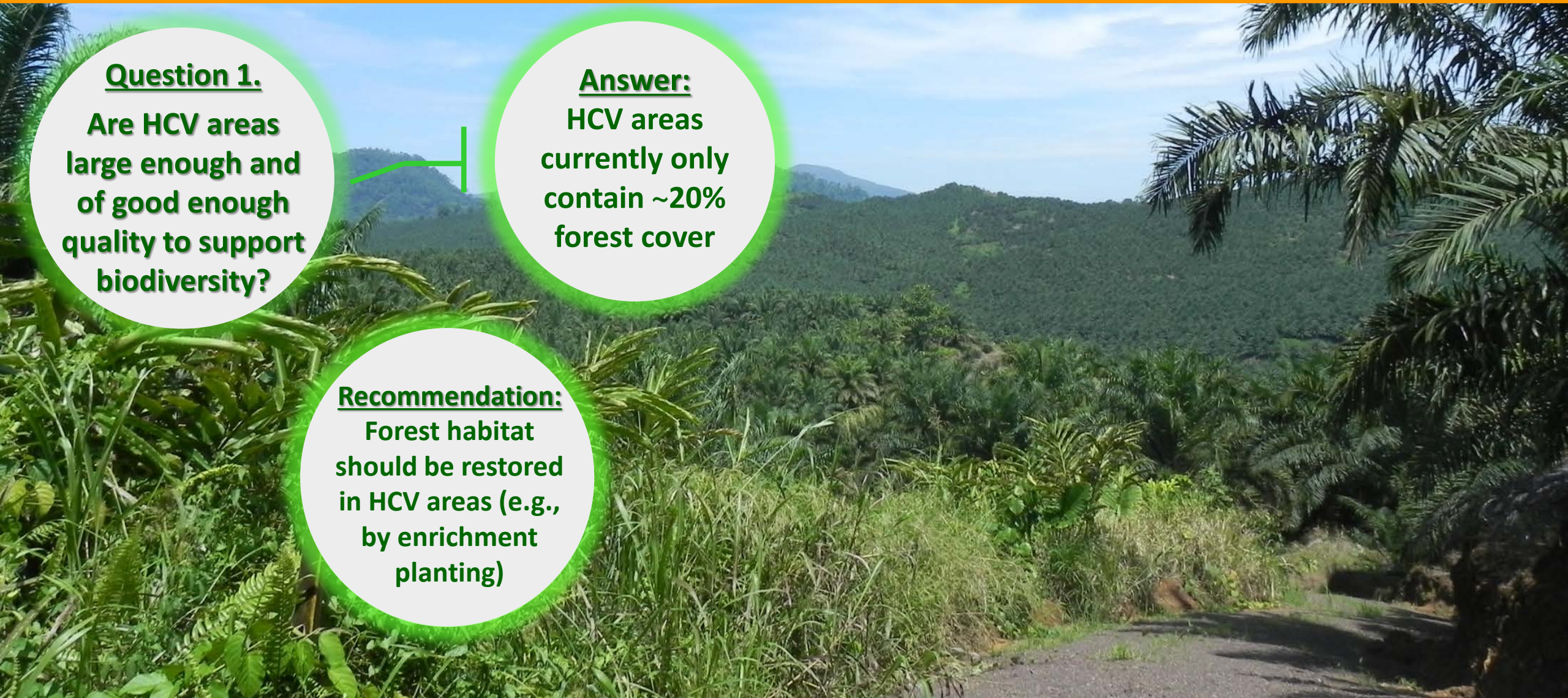
Are HCV areas large enough and of good enough quality to support biodiversity?

Answer:

HCV areas currently only contain ~20% forest cover

Recommendation:

Forest habitat should be restored in HCV areas (e.g., by enrichment planting)



Recommendations

Answer:
Not at present...

Question 2.
Do HCV areas improve connectivity in oil palm landscapes?

Recommendation:
But, connectivity can be substantially improved if HCVs are reforested

New HCV areas should connect up existing protected areas, community forests and other HCV areas

With thanks to...



Prof Jane Hill



Dr Kimberly Carlson



Dr Jenny Hodgson



Dr Robert Heilmayr



Dr Colin McClean



Dr Jen Lucey

Charlotte Smith

Derek Risch

Kelsey Barrow

Datuk Dr Glen Reynolds

Dr Agnes Agama

J2 lab group, York

