

# Opportunities for Increasing Productivity & Profitability of Oil Palm Smallholder Farmers in Central Kalimantan

**April 2015**

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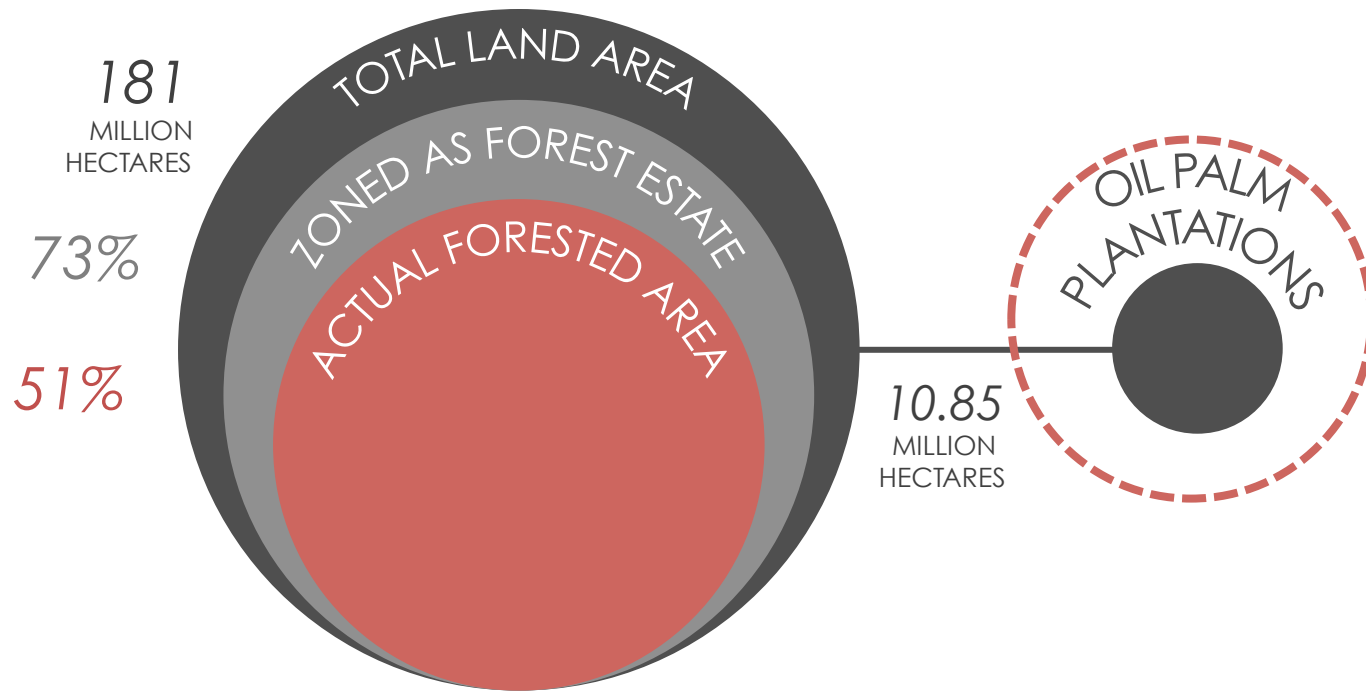


# Indonesian & Central Kalimantan Context





Indonesia is home to **10% of the world's tropical forests.**

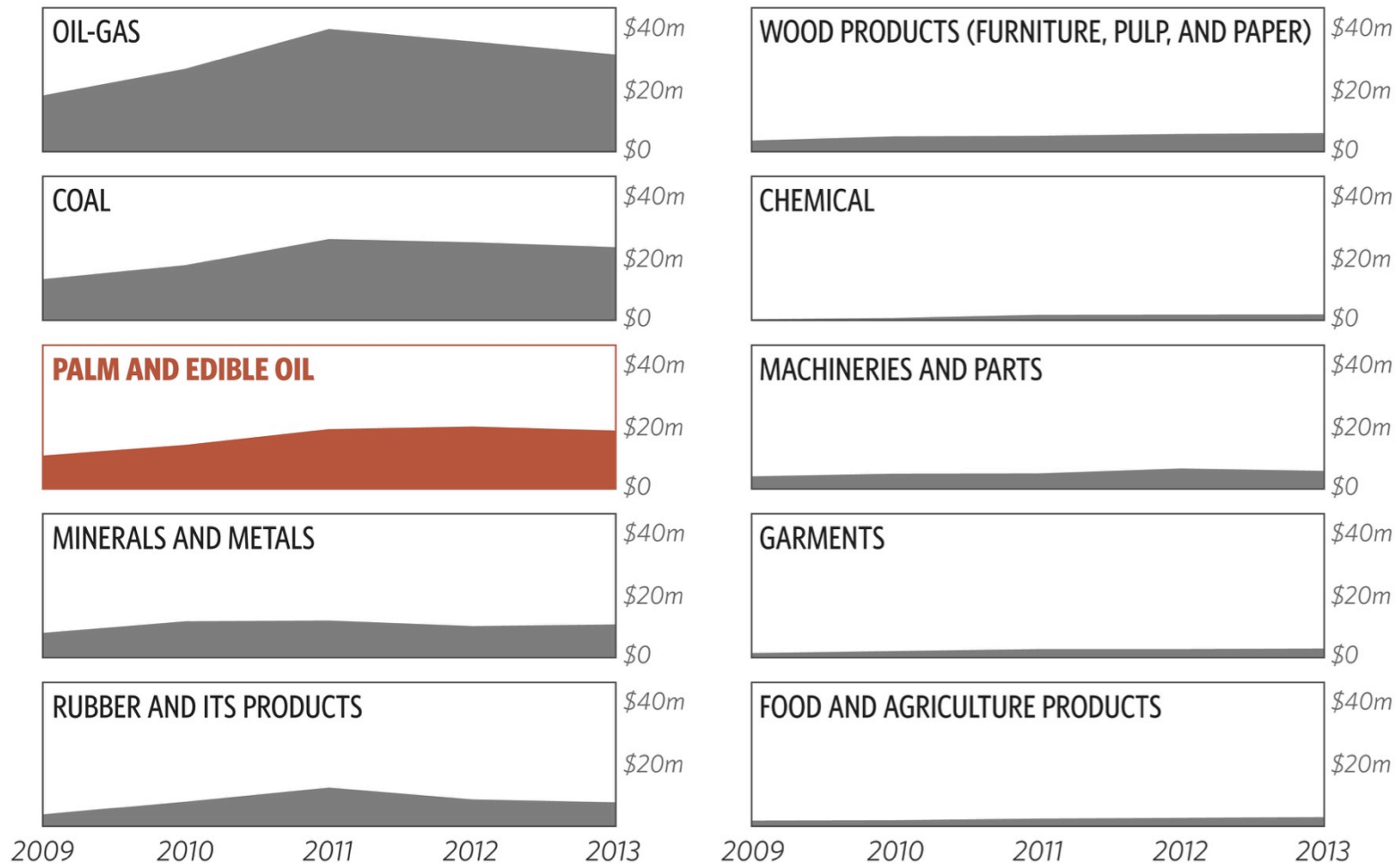


It is also the **world's largest oil palm producer**, and growth in oil palm plantations is a **major driver of deforestation.**

Source: Directorate General Planning, Indonesian Ministry of Forestry, PILAR own Analysis & Indonesian Bureau of Statistics, 2013 Oil Palm Statistics



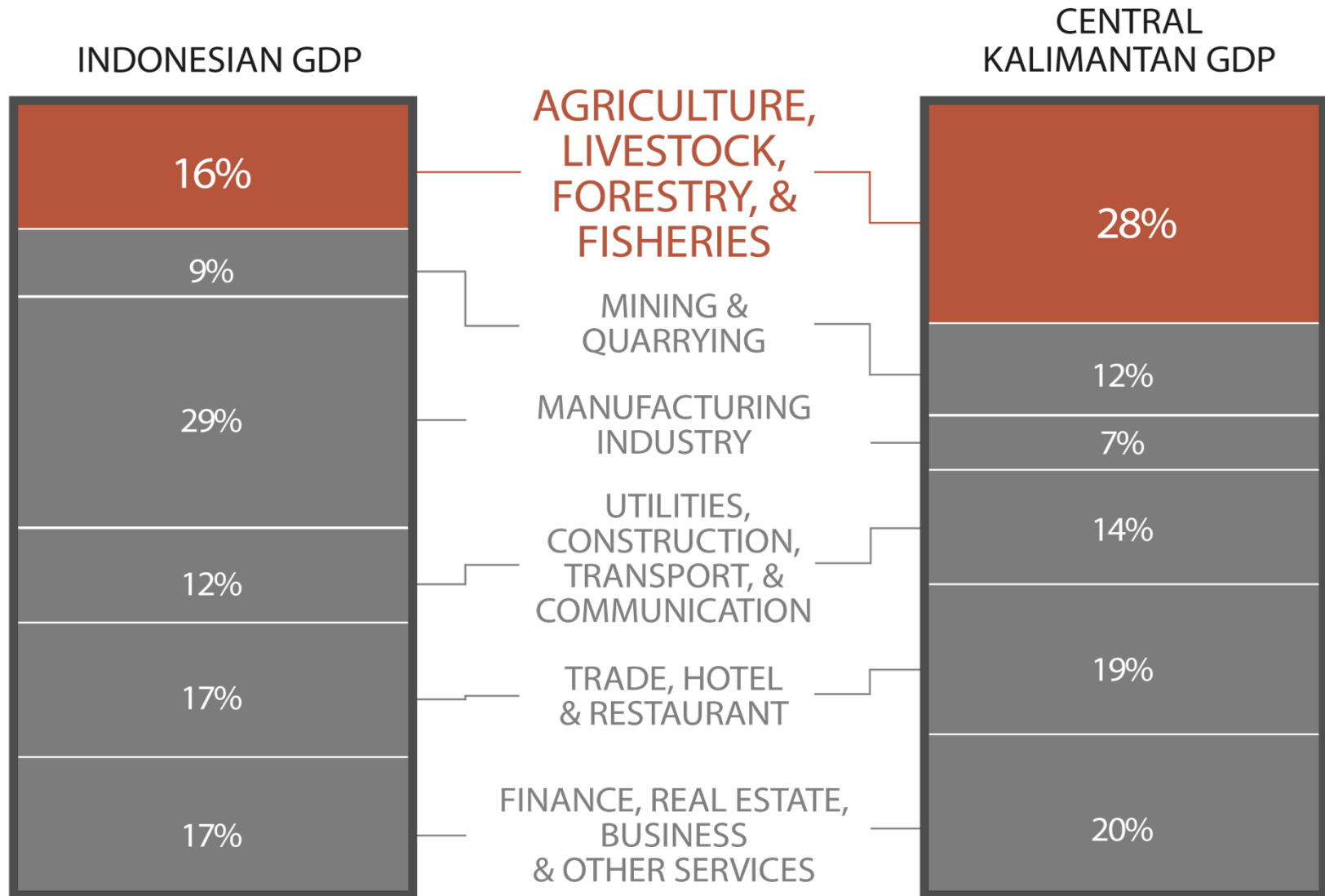
**Palm oil is Indonesia's third largest export, and hence an important part of the local economy**



Source: Indonesian Bureau of Statistics 2013



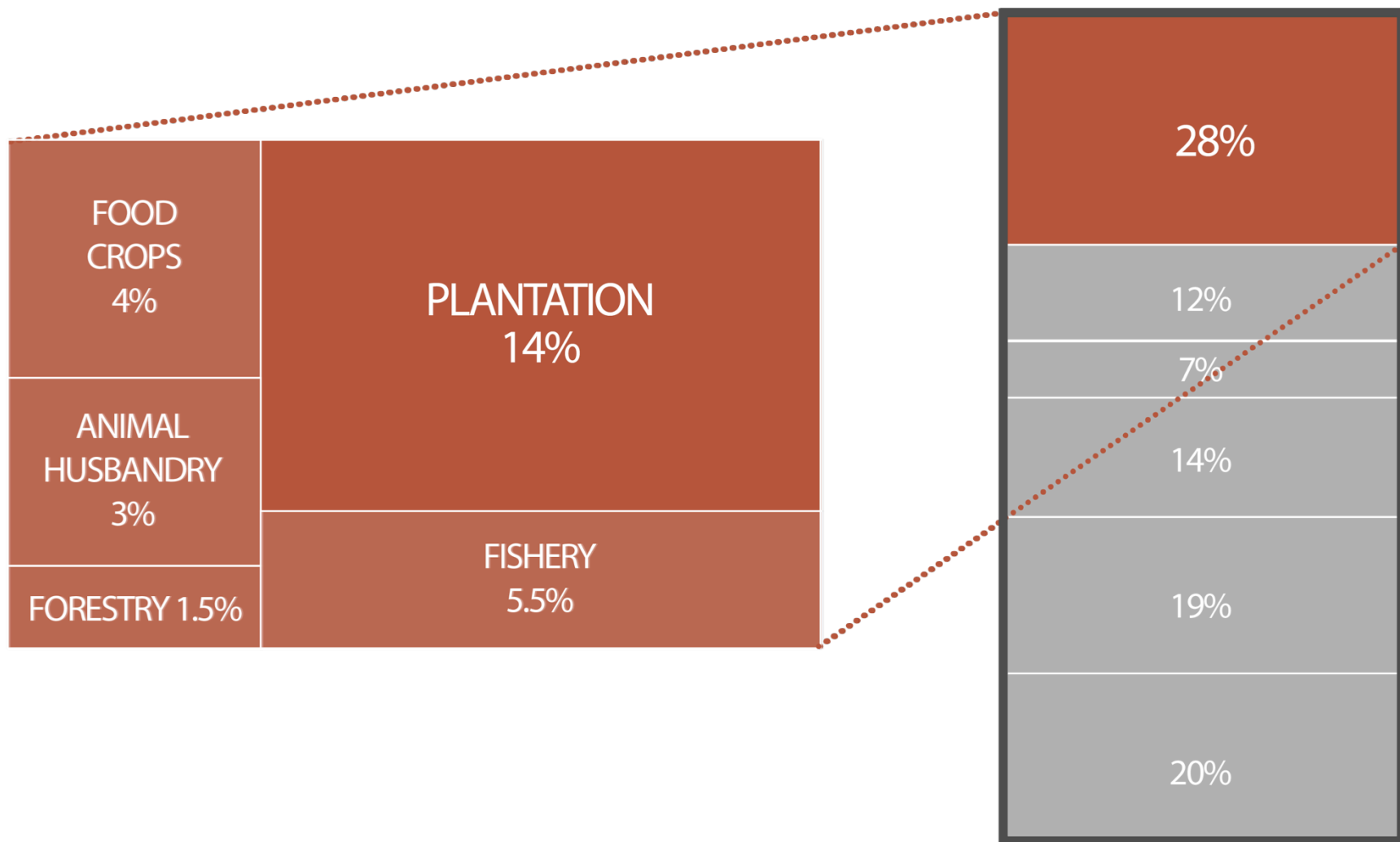
Agriculture plantations are a **major contributor to Indonesia's GDP.**



Source: Indonesian Bureau of Statistics 2013

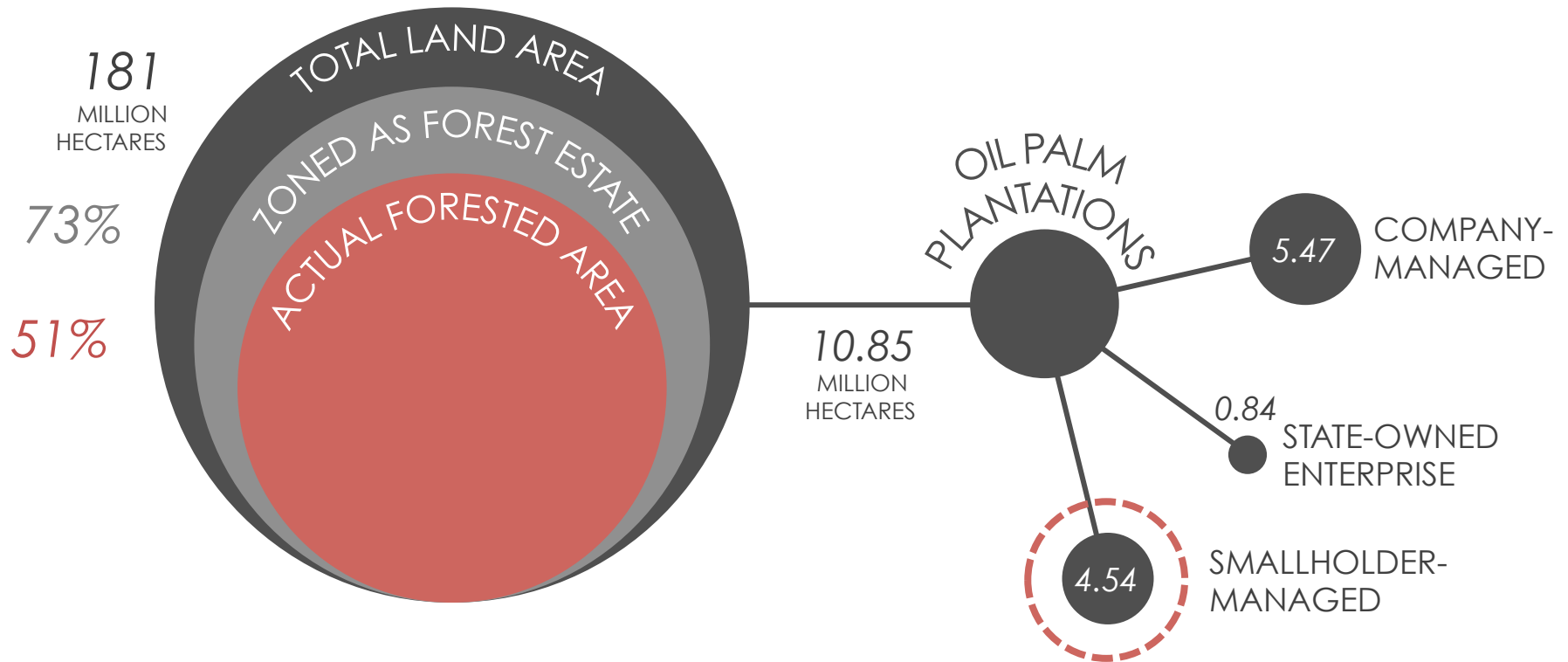


With oil palm plantations contributing approx. **14% of Central Kalimantan's GDP...**



Source: Indonesian Bureau of Statistics 2013

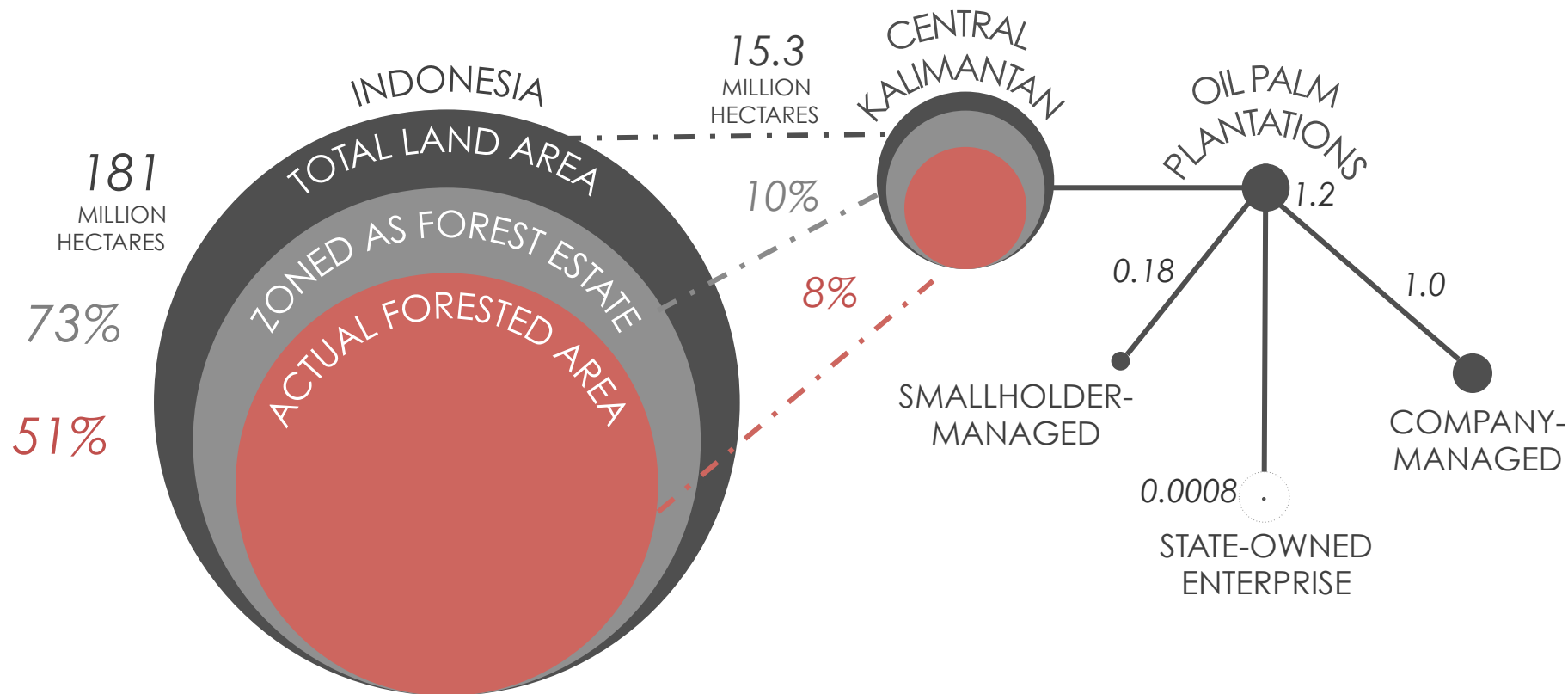
Finding **opportunities to achieve economic growth** alongside **protection** of Indonesia's **valuable forest resources** is critical.



Source: Directorate General Planning, Indonesian Ministry of Forestry, PILAR own Analysis & Indonesian Bureau of Statistics, 2013 Oil Palm Statistics



Nearly **10%** of both Indonesia's **forests & oil palm plantations** are located in **Central Kalimantan**.



There are important opportunities for Central Kalimantan to **manage its land resources efficiently** to support high productivity oil palm, while protecting valuable forests ecosystems.

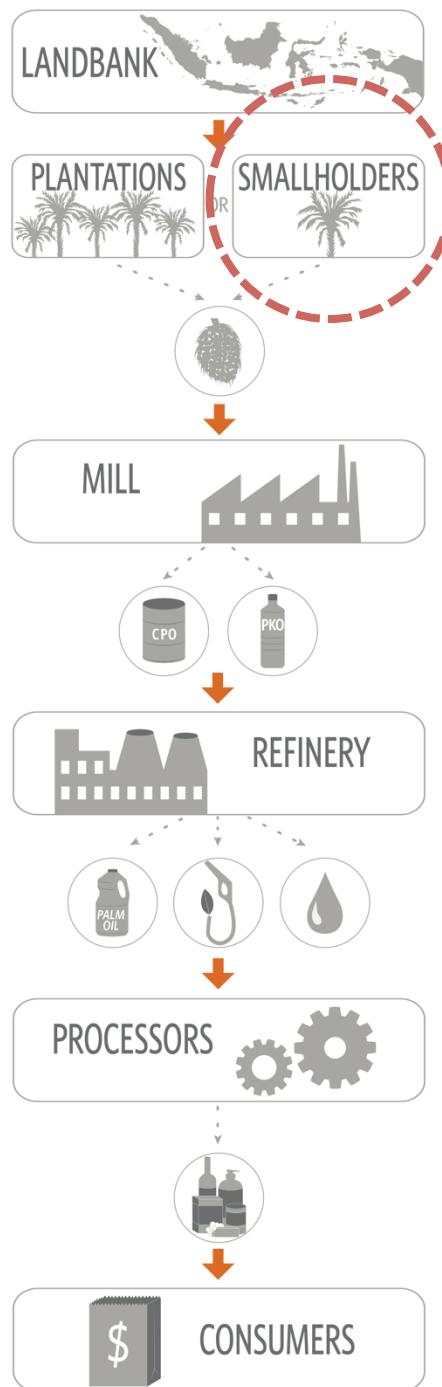
Source: Directorate General Planning, Indonesian Ministry of Forestry, PILAR own Analysis & Indonesian Bureau of Statistics, 2013 Oil Palm Statistics





# Oil Palm Value Chain





# Various Oil Palm Smallholder Farmer Organization Models in Central Kalimantan

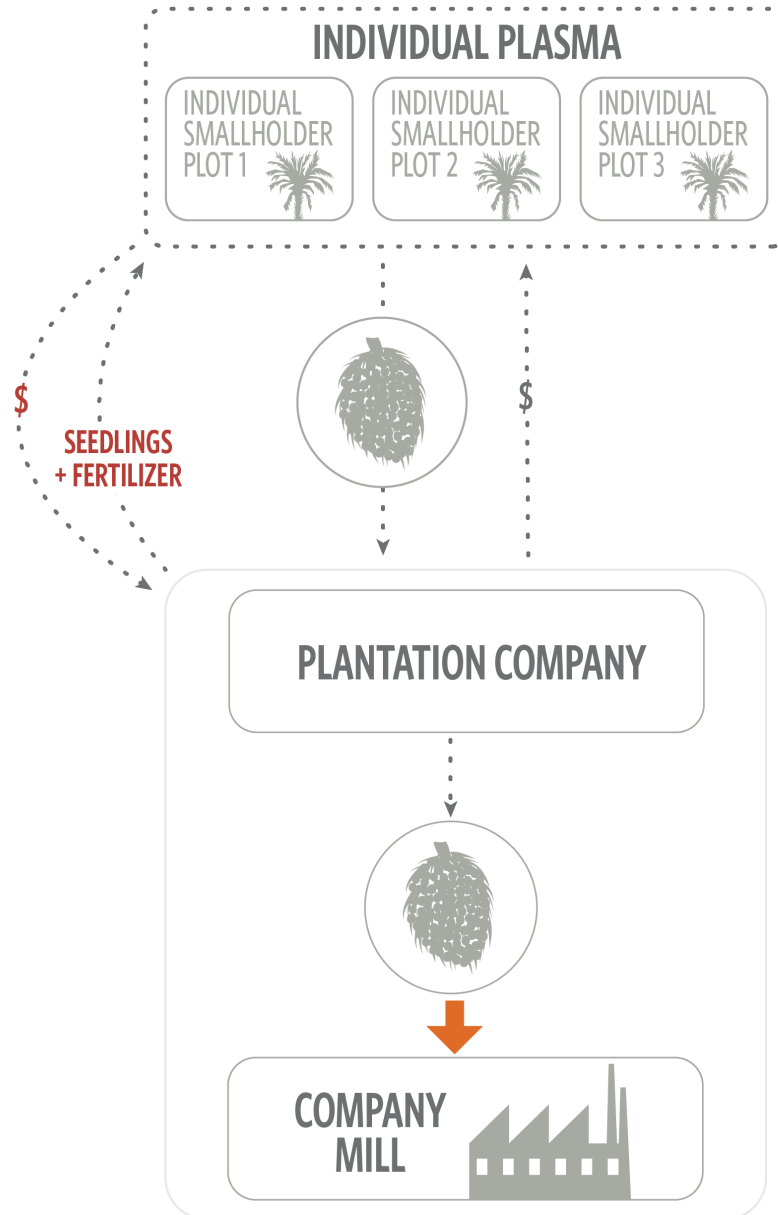
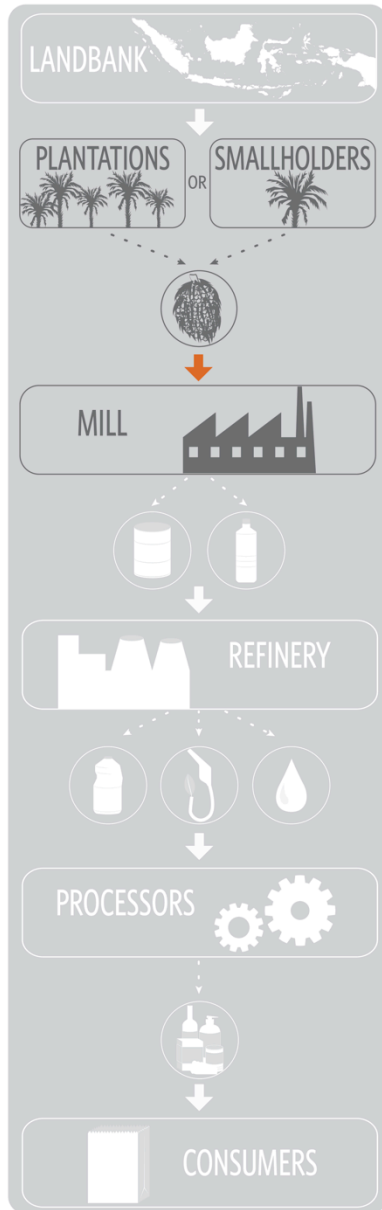


# Smallholder farmer organization models

- Consultations conducted as part of our study suggest there are four main models of smallholder organization in Central Kalimantan (although variations of each exist). We call these models:
  - Individual partnership scheme
  - Cooperative scheme
  - Company managed scheme
  - Independent smallholder farmers
- Each of these models developed owing to different local circumstances of communities and companies and plantations have existed for varying lengths of time, ranging from 6 to 17 years
- All models have scope to strengthen organization and yield to deliver greater livelihood benefits for smallholder farmers and improve integration into the value chains



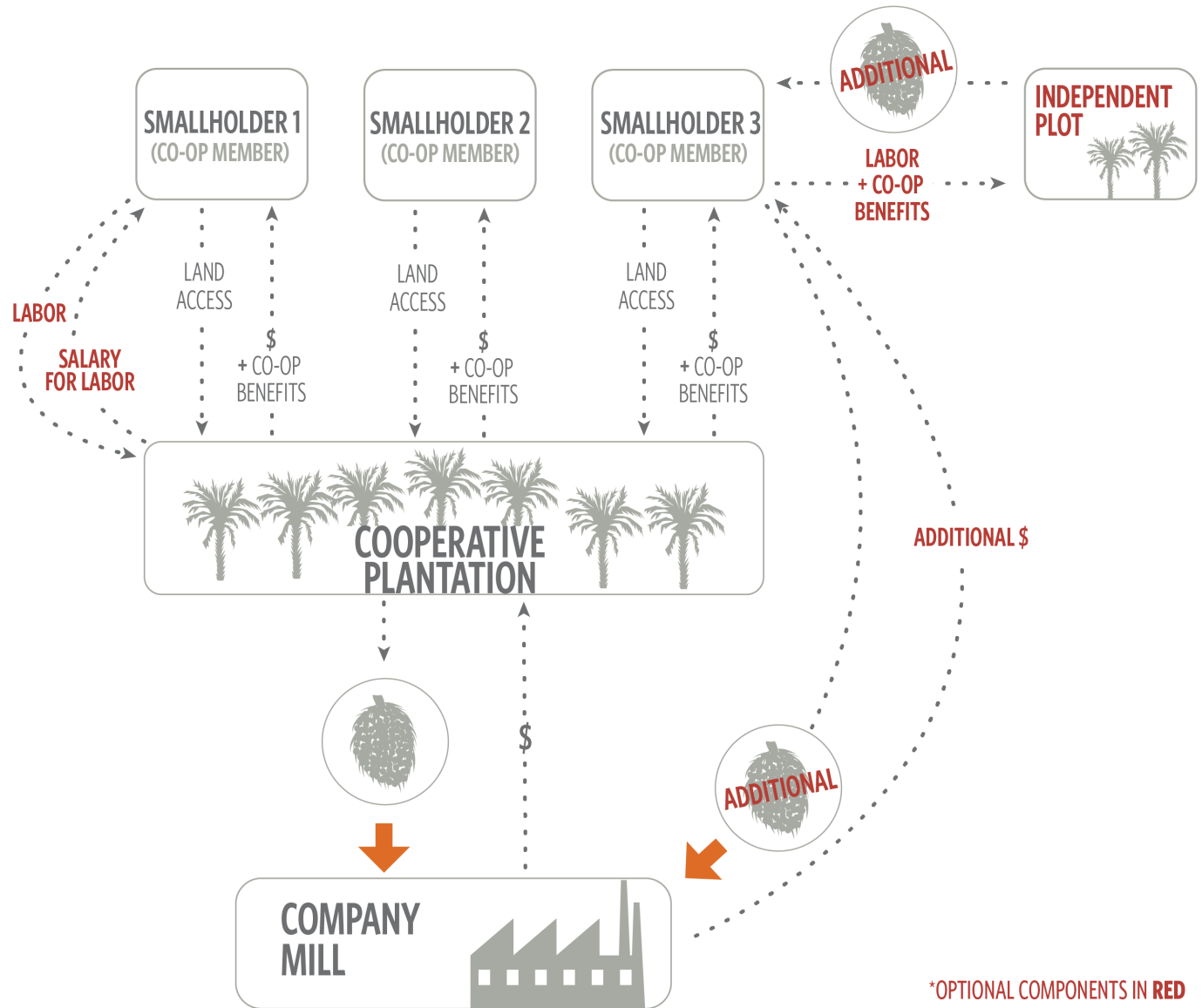
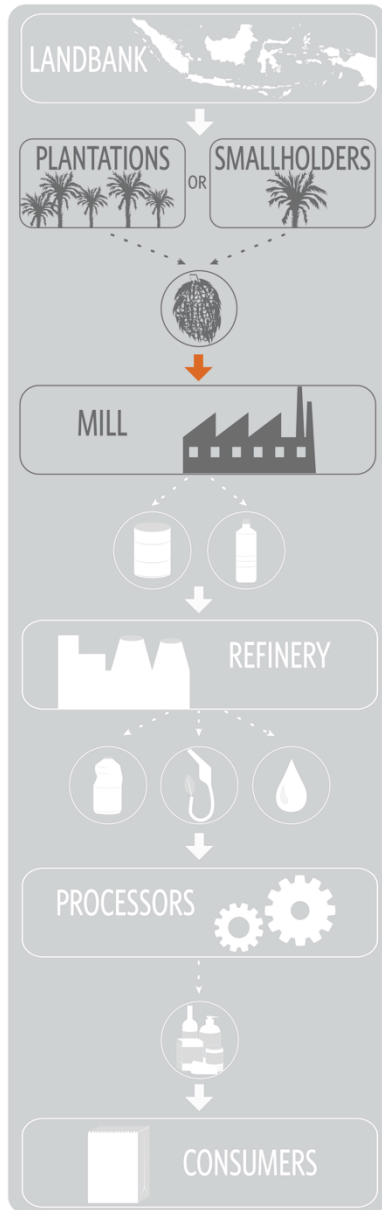
# Individual Partnership Scheme



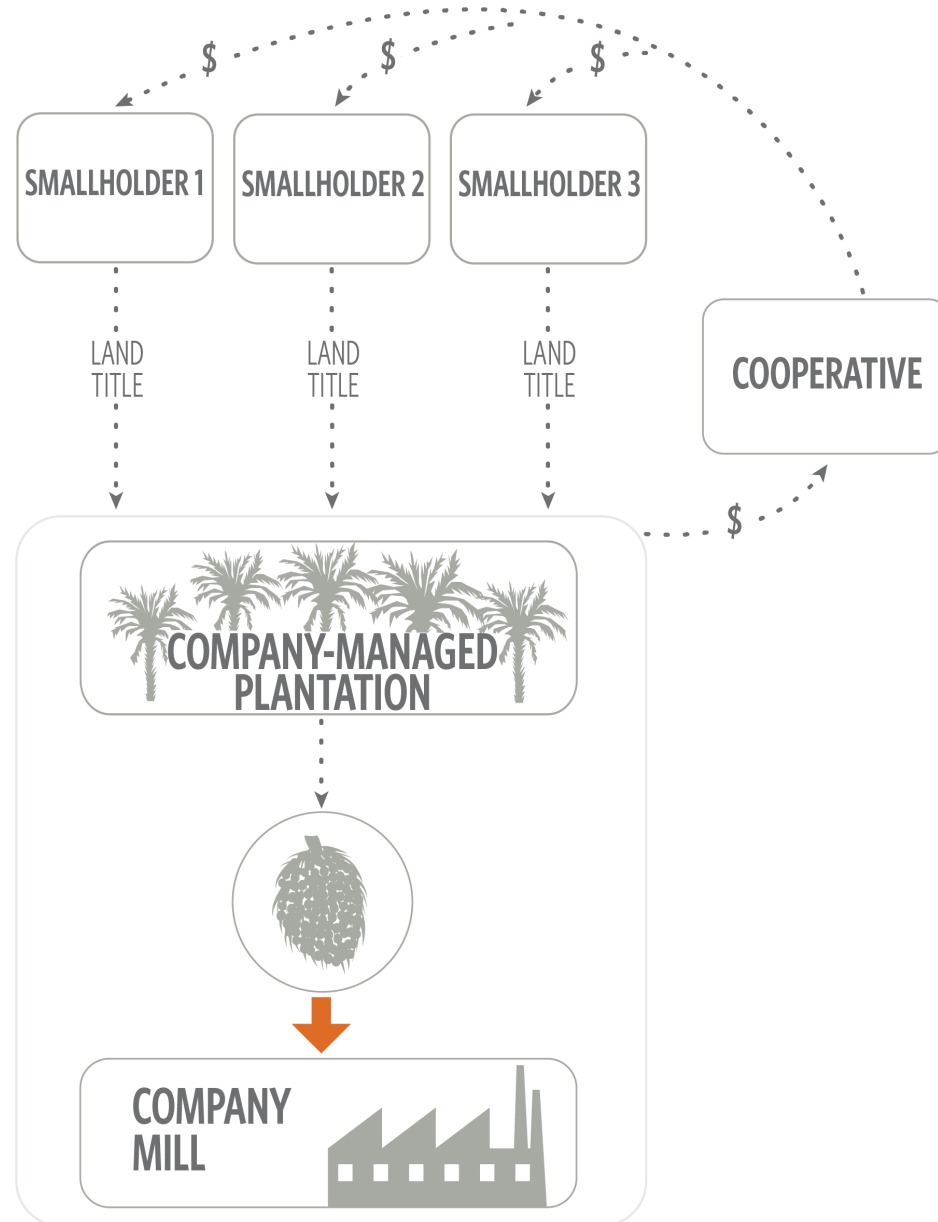
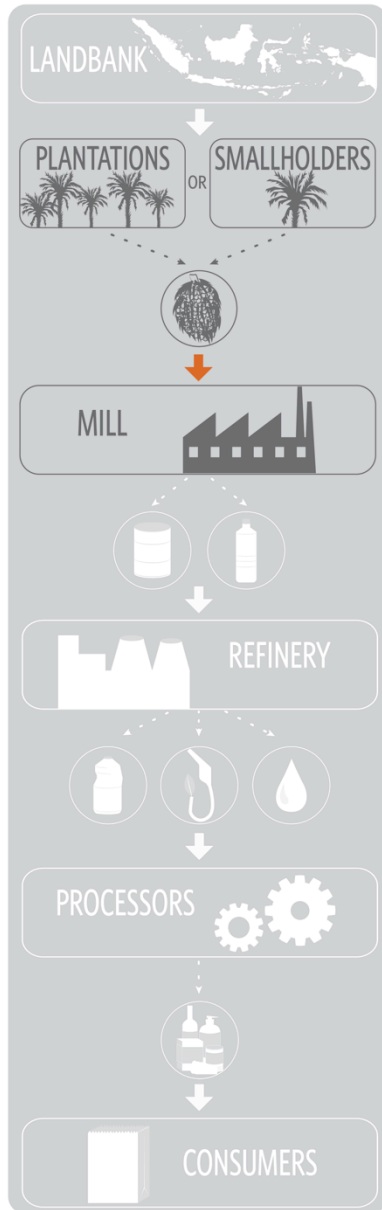
\*OPTIONAL COMPONENTS IN RED



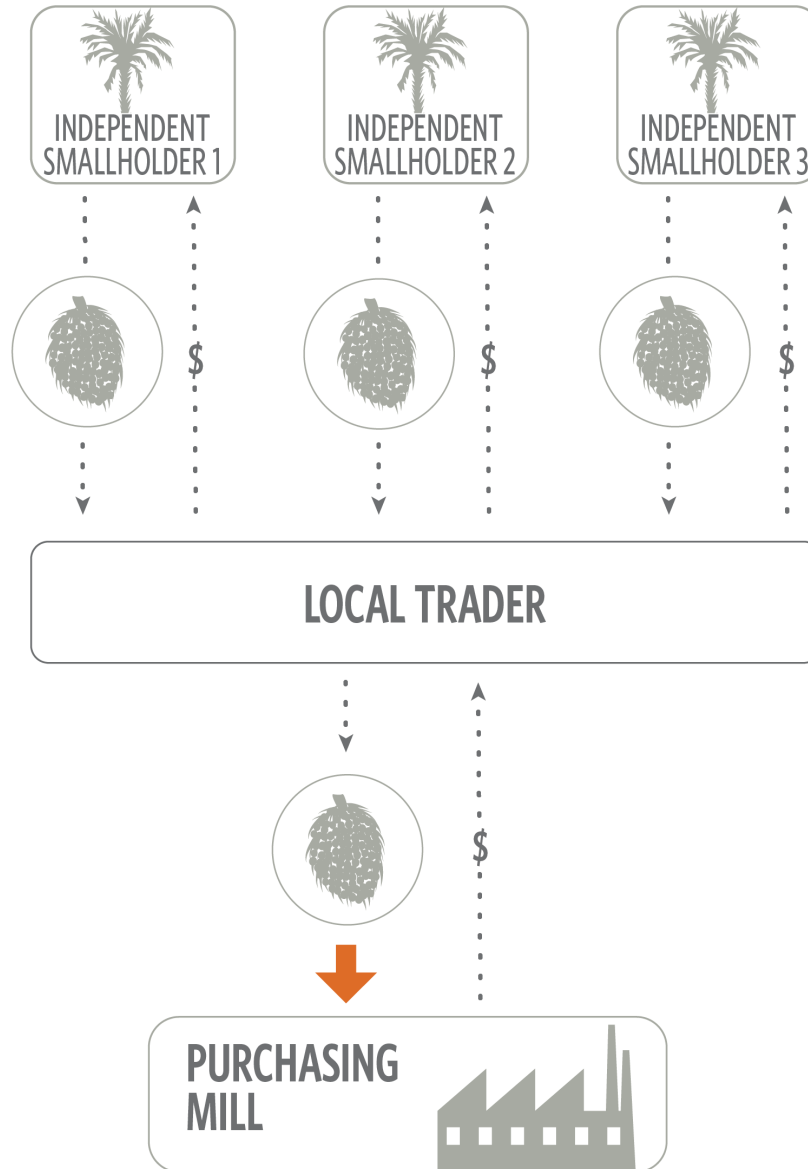
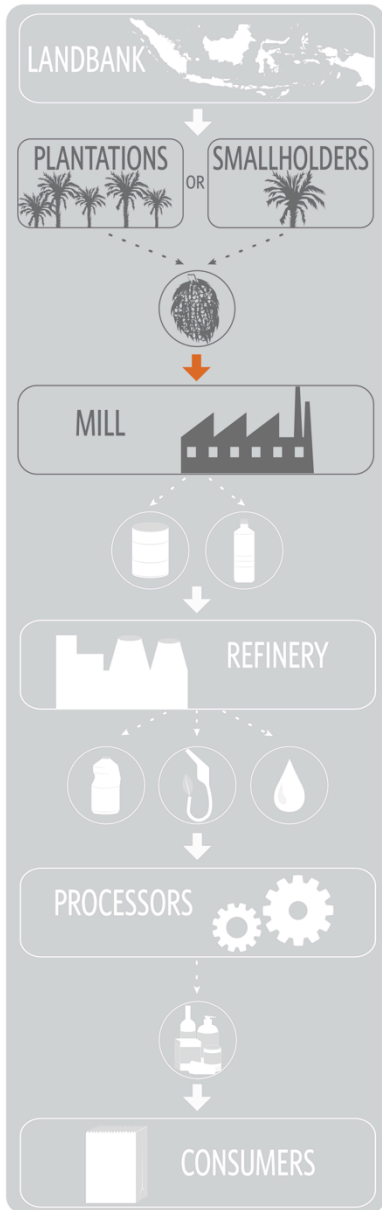
# Cooperative Scheme



# Company-Managed Scheme



# Independent smallholders



Opportunities for increasing productivity & profitability  
of smallholder – company partnerships



## Highlights:

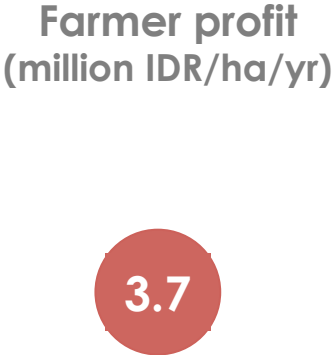
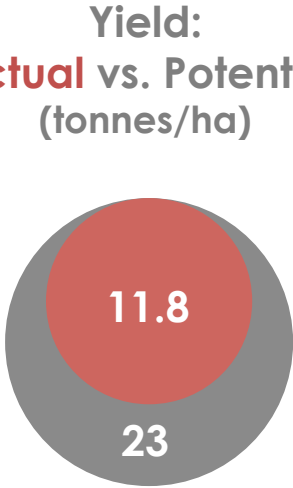
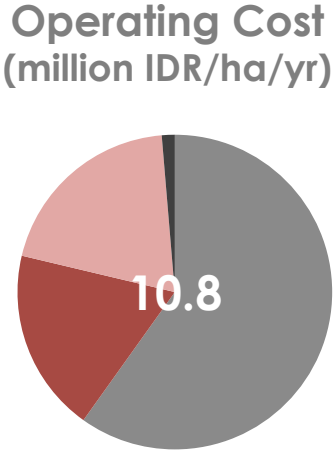
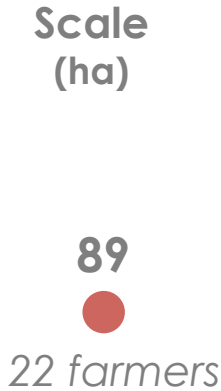
- Each model have advantages and disadvantages, and all have scope for strengthening to deliver greater smallholder farmer livelihood benefits and increased value chain integration
- The cooperative model is highly successful in managing risks (incl. production, legal, market) & delivering reliable benefits to local farmers and the community.
- Opportunities to improve productivity and farmer benefits within all models, particularly for individual partnership and independent farmers.
- Independent smallholders are most risk exposed and consistently display lower yields than plasma farmers, owing to systemic supply chain efficiencies.



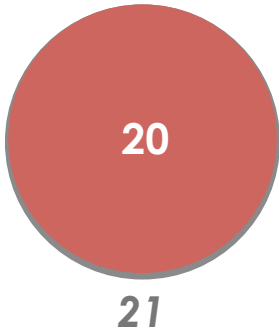
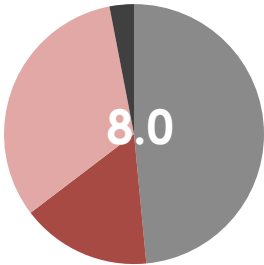


Scale, operating costs, & yield are all important factors impacting on profitability for smallholder farmers

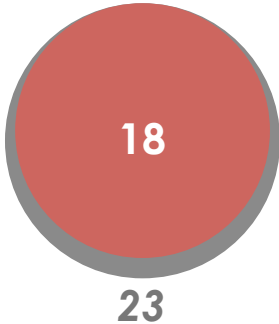
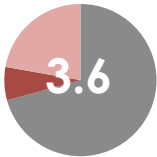
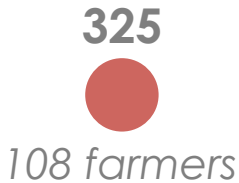
INDIVIDUAL  
PARTNERSHIP



COOPERATIVE

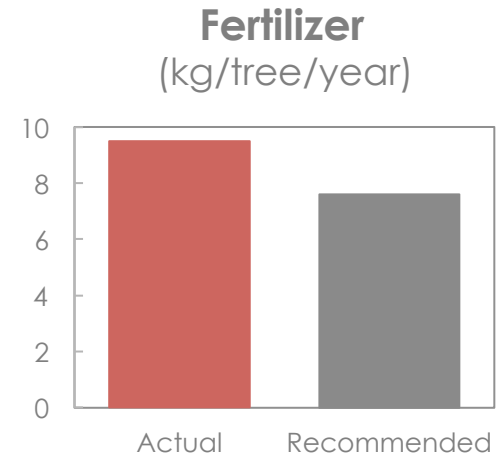
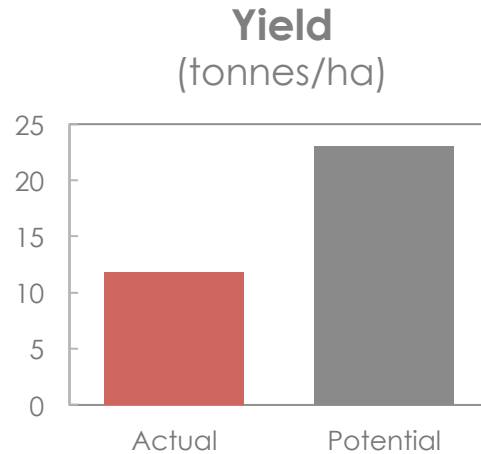


COMPANY  
MANAGED

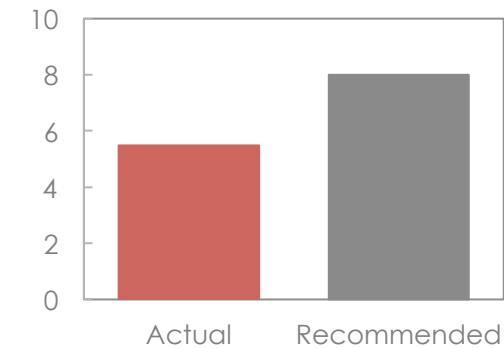
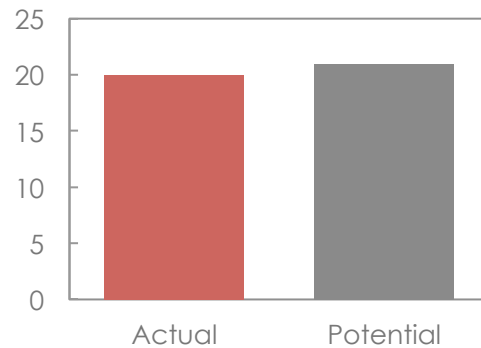


There are **opportunities to increase productivity** of existing plantations

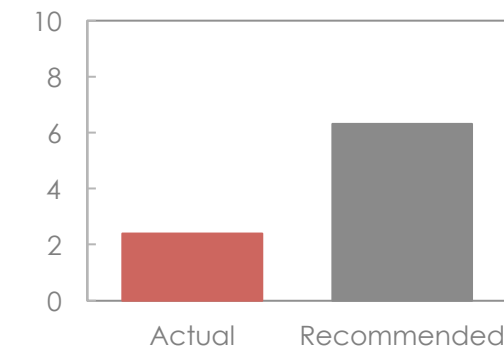
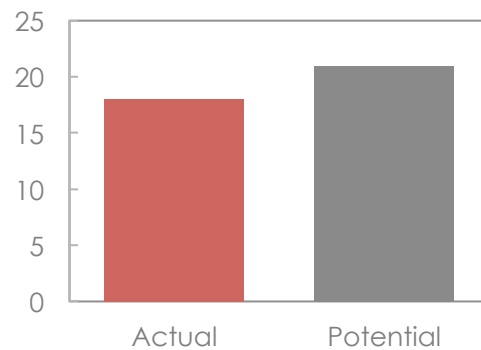
### INDIVIDUAL PARTNERSHIP



### COOPERATIVE



### COMPANY- MANAGED

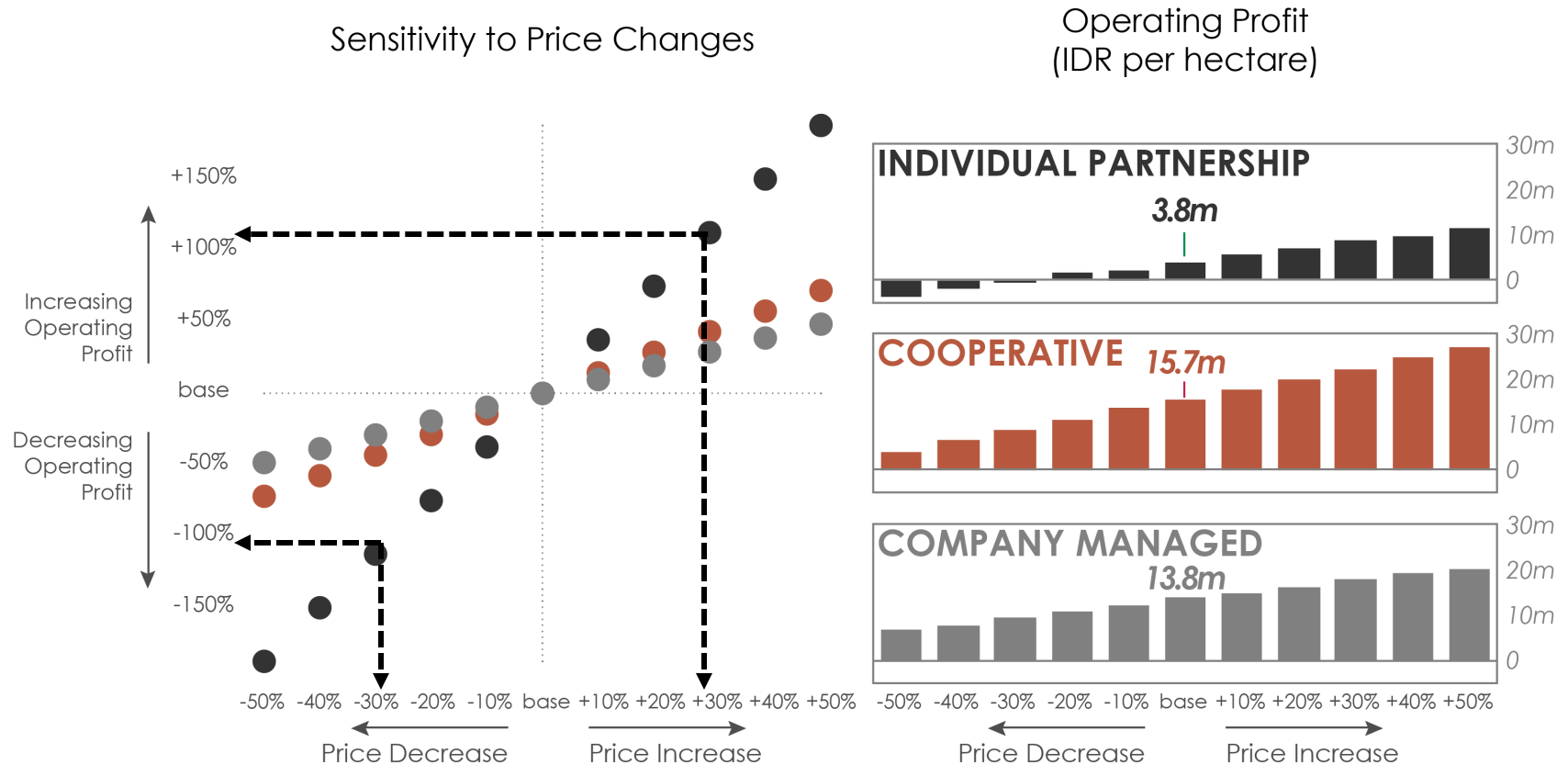


## Cooperative model offers greatest **ability for farmers to manage risks**

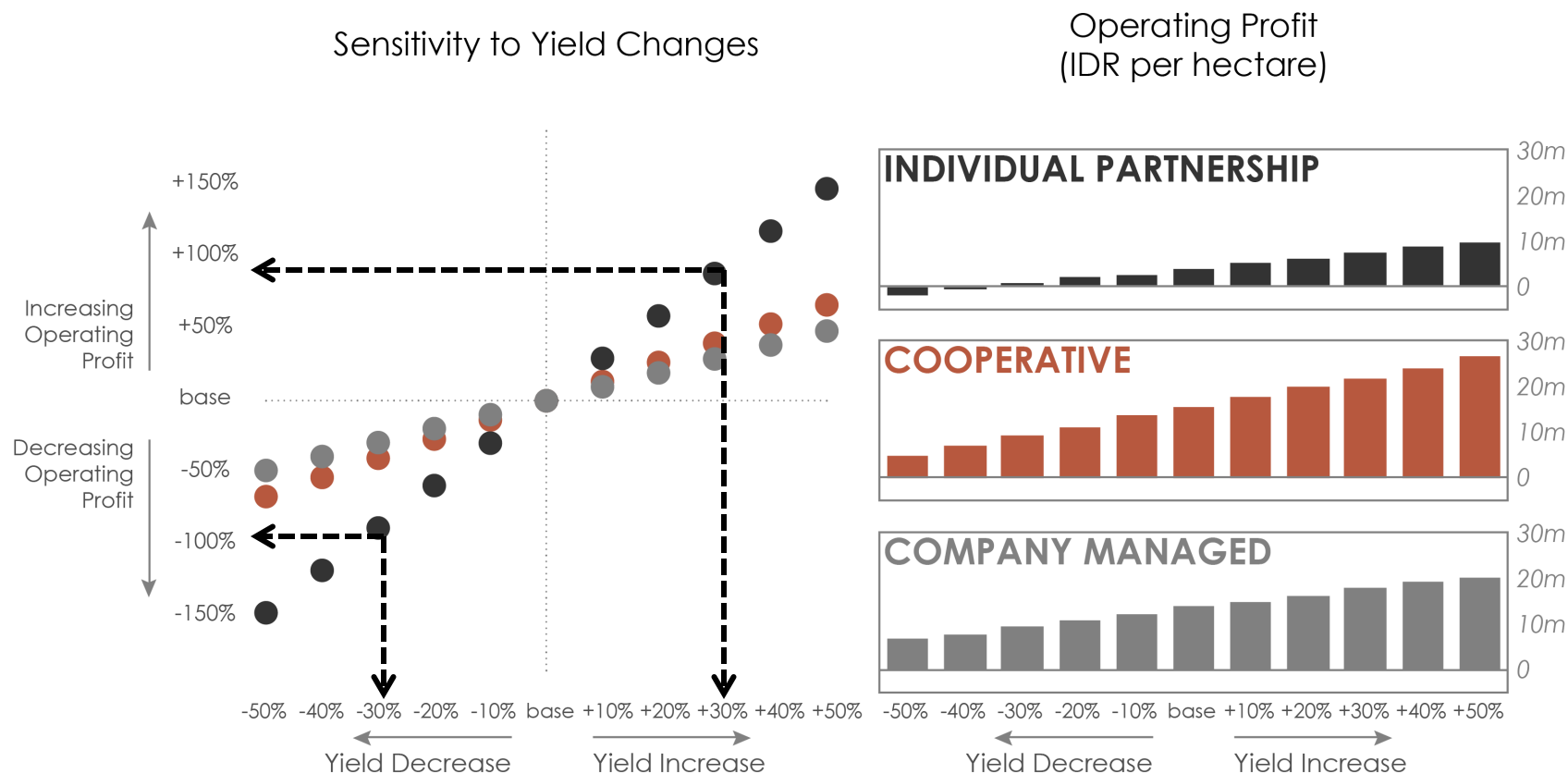
Risk Type:	Production	Legal	Supply	Market
<b>INDIVIDUAL PARTNERSHIP</b>	<ul style="list-style-type: none"> <li>Each plot is separate production unit</li> <li>Risk borne by individual farmers</li> </ul>	<ul style="list-style-type: none"> <li>Risk borne by individual farmers</li> </ul>	<ul style="list-style-type: none"> <li>Fertilizer supply guaranteed by company</li> <li>Limited ability to improve infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Off-take agreement with partner company, but highly sensitive to price fluctuations owing to scale</li> </ul>
<b>COOPERATIVE</b>	<ul style="list-style-type: none"> <li>Single production unit (comprised of farmer plots contributed by members)</li> <li>Risk mutualized</li> <li>Reserve fund for replanting</li> </ul>	<ul style="list-style-type: none"> <li>Risk mutualized <i>12ha currently under dispute – but all members still receive benefits from active plantation</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Able to directly access fertilizer from suppliers owing to scale</li> <li>Able to invest in local infrastructure directly</li> </ul>	<ul style="list-style-type: none"> <li>Protected by company partner thru guaranteed off-take</li> <li>Price fluctuations can impact, but established reserve fund to mitigate</li> </ul>
<b>COMPANY MANAGED</b>	<ul style="list-style-type: none"> <li>Company holds risk</li> <li>However, if land becomes unproductive unlikely to provide income to farmers</li> </ul>	<ul style="list-style-type: none"> <li>Farmers highly vulnerable without valid land certificate</li> </ul>	<ul style="list-style-type: none"> <li>Company responsible - able to access fertilizer and invest in infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Off-take guaranteed as company managed, but farmers remain sensitive to price fluctuations</li> </ul>



# Sensitivity of smallholder models to changes in price



# Sensitivity of smallholder models to changes in yield





# Study findings on Independent smallholders



## Summary of findings: Independent Smallholders

- Independent smallholders are exposed to wide range of systemic risks and economic inefficiencies
- Coordination & organization of smallholder farmers can help to:
  - ✧ address risks
  - ✧ better integration of smallholder farmers into the value chain
  - ✧ improved profitability and productivity.



# Study Recommendations and Follow Up



## Study Recommendations & Follow up:

- Strong case for **larger scale, more integrated smallholder plantation management**
  - uses land more efficiently
  - delivers higher productivity
  - provides greatest community benefits and welfare
- **Getting the right institutional settings and business model is critical to success in developing smallholders**

### Planned follow up:

- **Case studies on cooperatives** – to better understand features of a successful cooperative
- **Toolkit for selecting organizational model** – not a one-size-fits-all approach. Community farmers need support to select most suitable model for their economic, social and environmental circumstances.
- **Linking analysis** with parallel analysis on **high value ecosystems** to ensure smallholder plantations are being developed on suitable lands



How can these institutional settings and organizational models help communities, government & oil palm value chain?





## Increasing productivity, profitability & sustainably throughout value chain

- Models for improving smallholder organization will enable:
  - increase overall productivity of the sector by improving farming practices and applying good management practices
  - help to decrease company conflicts by establishing context-appropriate partnerships that manage risk & maximize benefits
  - increase ability to ensure smallholders are also engaging in sustainable practices and locating plantations on suitable lands
  - improved supply chain integration from upstream to downstream

- **For communities:** this will enable choices about best institutional settings and business model for communities engaged in oil palm, manage risks, support improved agricultural practices and market access, while also create positive impact for regional development
- **For governments:** this will support sectoral economic growth targets, promotion of community livelihoods and improved environmental sustainability and outcomes at scale
- **For business:** this will reduce community conflict, manage risks, ensure business sustainability gains are not offset by smallholder expansion into important ecosystems, and strengthening supply chain development in oil palm business.



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