



# AgDevCo<sup>®</sup>

## TRANSFORMING COMMUNITIES IN NORTHERN MALAWI

Case study of AgDevCo's transformational impact through its investment in Tropha

March 2019



## ABOUT AGDEVCO

AgDevCo is an impact investor which aims to contribute to the transformation of African agriculture from subsistence farming to a modern, commercial sector. AgDevCo provides debt, equity, and hands-on support to establish and develop commercial-scale agribusinesses. It has invested over \$128 million into 70 agribusinesses across 8 African countries. AgDevCo considers the indirect and systemic impact of its investments, as per the IFC impact management principle 4, and is leading the industry with qualitative case studies to monitor these changes.

## ABOUT THIS CASE STUDY

This independent case study analyses the transformational impact of AgDevCo's investment in Tropha. It was prepared by IPE Triple Line in March 2019 as part of a wider study of transformational impact the AgDevCo's portfolio. Findings from this work have been used by AgDevCo to refine its approach to transformational change.

The study is based on site visits to Lilongwe, the Tropha estates at Ekwendeni and Rumphi, and several surrounding villages. Data was collected through semi-structured interviews with key informants from AgDevCo and Tropha staff, focus group discussions with employees and smallholder farmers, and analysis of quantitative data provided by Tropha.

The case study methodology used a network analysis approach, which tries to understand the ways in which each investment is connected to different actors, from their employees to suppliers and buyers. Quantitative and qualitative data was used to construct simple maps of the pre- and post-investment networks, which allowed us to build a visual picture of how the AgDevCo investment has had an impact, and how this has changed over time.

## SUMMARY

**Tropha is a commercial macadamia, chilli and paprika farmer in Northern Malawi. This study explores how Tropha is beginning to catalyse growth in the macadamia value chain through crowding - in and stimulate economic activity in rural communities.**





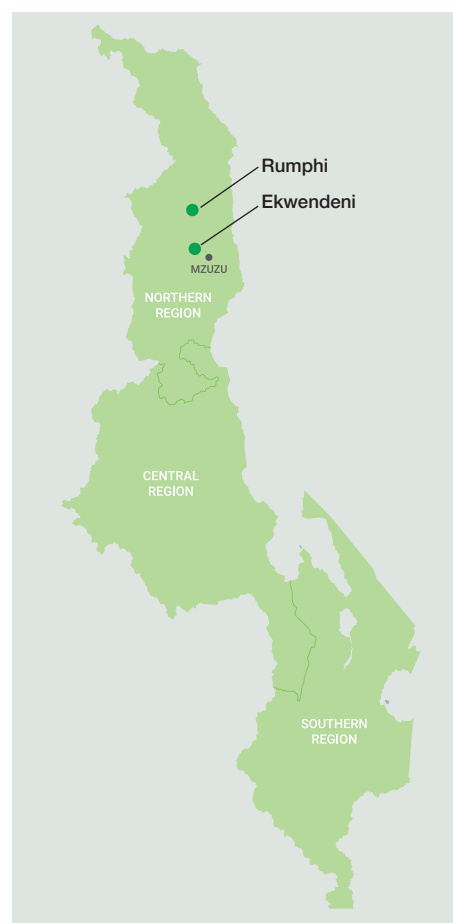
# THE CONTEXT

## THE COMPANY

Tropha is the Malawian subsidiary of UK-based farming company Jacoma. It owns two farming estates in the underdeveloped northern part of Malawi: Kaweche, located near Ekwendeni, and Thulwe, near Rumphi. Tropha is the first fully irrigated, high density commercial Macadamia farming operation in Malawi, growing and de-husking nuts before sending them to South Africa for final processing. Tropha also cultivates chilli and paprika for the export market, processing both in an on-site powdering facility. In addition to their own production activities, Tropha buys and markets crops from smallholder macadamia, chilli and paprika farmers who are also provided with inputs on credit and technical assistance. As a result of these activities Tropha is creating jobs in a region where formal employment levels are low, and is providing a stable off-take market for thousands of smallholder farmers.

## AGDEVCO'S ROLE

AgDevCo has been an investor in Tropha since 2014, committing \$6.1M, including \$2M in equity. As a shareholder in the business, AgDevCo sits on the board of directors and contributes to the strategic direction of Tropha, as well as providing active support to develop the outgrower system to ensure that the developmental impact is maximised. AgDevCo's funding has been instrumental in enabling Tropha to implement the smallholder component, catalysed an additional \$8 million of equity by the CDC group and has leveraged grant funding for a 100 hectare community irrigation scheme.



## DIRECT IMPACT IN 2018



**912**

Full-Time equivalent (FTE) jobs created and sustained



**36%**

of employees are women



**3,220**

smallholders linked to markets (47% women)



**\$760,000**

goods exported in 2018



**\$38,000**

Total annual smallholder income generated



**\$65,000**

Total annual employee income generated



## AGDEVCO'S VISION FOR TRANSFORMATIONAL CHANGE

AgDevCo investments do not only generate direct impact, but in many cases can have a transformational impact on the local economies in which they are located. These more indirect impacts are referred to as economic transformational change.

### Transformational change:

"Wider knock-on effects in markets and rural communities, as a result of changes for AgDevCo investees and the smallholders that they work with.

These ripple effects can include (but are not limited to) economic spill-over activity, behavioural changes of other companies and farmers, and increases in economic activity along value chains"

AgDevCo investments create transformational change in two key ways:

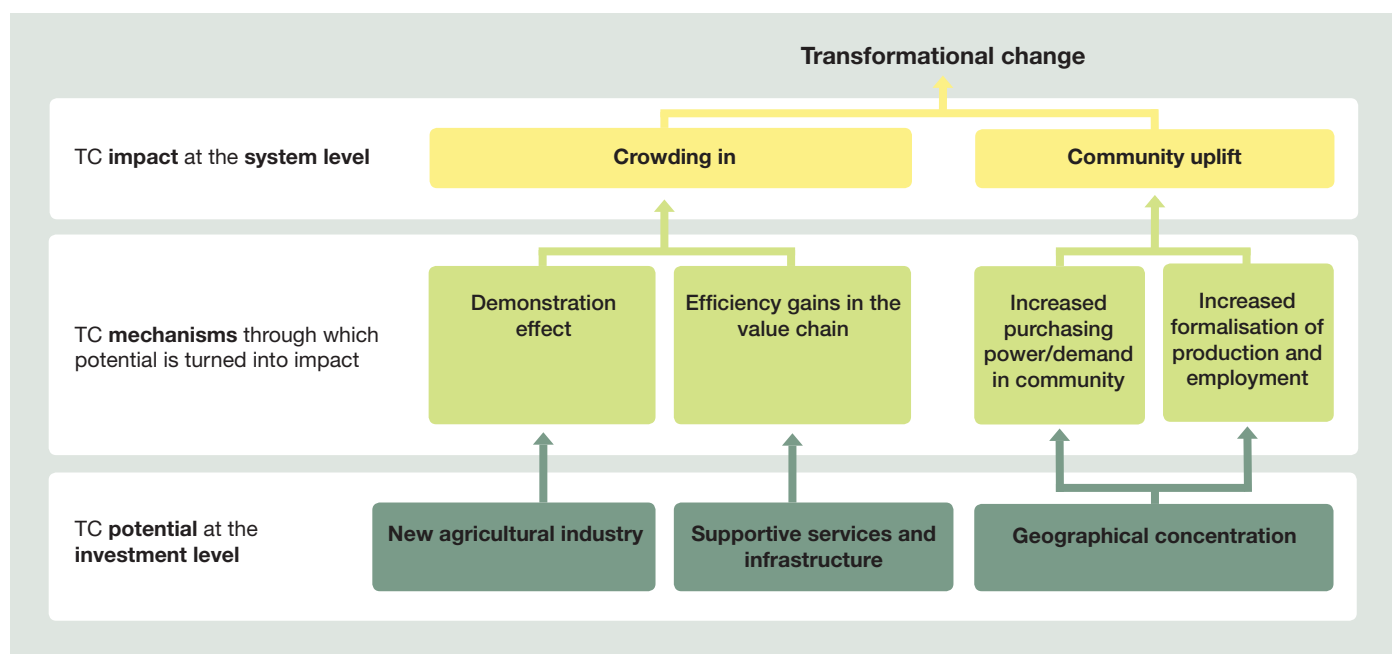
- > **Crowding-in of investment:** the investment can indirectly result in the growth and expansion of the overall value-chain.
- > **Community uplift:** the investment can also stimulate the local economy of the communities with which it is working, leading to the emergence of new economic actors and job opportunities.

In order for these changes to occur, investments have to have certain characteristics. Understanding these characteristics can tell us something about the **potential** for transformational change of each investment.

- > **The investment introduces a new agricultural industry to an area:** the investment establishes the commercial production, processing or value-addition of a crop or livestock in an area where it was not previously grown. The investment could also be introducing smallholder commercialisation of the product.
- > **The investment's direct impact is geographically concentrated:** the investment will formally hire a high number of employees, or work with smallholder farmers living in the same geographic community, and provide them with and a significant income uplift. It can also plan on sourcing goods and services locally and spread good business practices. This is likely to lead to increased purchasing power, demand, and formalisation, and ultimately lead to community uplift.
- > **The investment provides supportive infrastructure and services:** the investment will provide services or infrastructure that has the potential to unlock increased efficiency of an agricultural value chain and lead to its growth. This could include input provision (seed, fertiliser, crop protection, finance, tools and machinery), skills training, policy and regulatory improvements (e.g. lab testing or market information services).

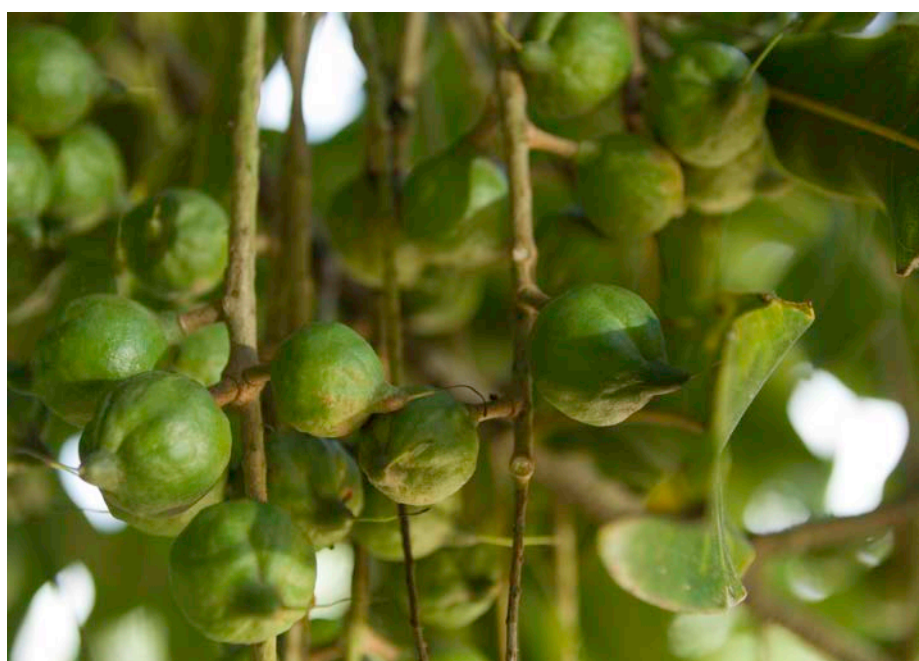
The diagram below summarises how AgDevCo conceptualises transformational change. The potential for change is identified at the investment level, and the impact is measured at the system level. The transformational change mechanisms are the way in which potential transformational change is turned into impact, and provide an indication of what kind of evidence might suggest that this is occurring.

**Figure 1. AgDevCo's approach to transformational change**



## TROPHA'S TRANSFORMATIONAL POTENTIAL

While the crops grown (macadamia, paprika and chilli) are not completely new to Malawi, Tropha aimed to be the **first irrigated, high-density commercial Macadamia farm in the country**. This was expected to attract other investors to the sector and into the broader value chain by demonstrating the business case. The investment also planned to create local employment opportunities and work with over 4000 smallholder farmers in an underdeveloped part of Northern Malawi, providing them with formal links to markets, training and fair prices. The investment is therefore expected to generate significant income uplift for these farmers, which would increase their purchasing power and have an **economic spill-over effect at community level**, stimulating additional economic activity.







## NETWORK CHANGES

Using network analysis, we found the following changes, visualised in Figure 2:

**Before Tropha started operating its outgrower scheme, macadamia, chilli and paprika smallholder farmers were poorly linked to markets, as shown by the map on the left.** With unreliable buyers and agents, and unstable prices (represented by the dotted arrows), the crops were losing their attractiveness in a region dominated by smallholder tobacco production. The macadamia farmers now working with Tropha sold their production to a cooperative, whose sole off-taker was 750km away, in the South of the country. Fluctuations in price and instability in demand meant that nuts sometimes went unsold and were left to rot, and there was little investment by farmers in their macadamia trees.

Similarly, chilli and paprika farmers largely sold their crops through intermediaries. These agents often took advantage of the smallholders' lack of knowledge about market prices and grades to buy their crops at a low price. The combination of volatile prices and an uncertain market resulted in income insecurity for smallholders, with many unable to even afford school fees.

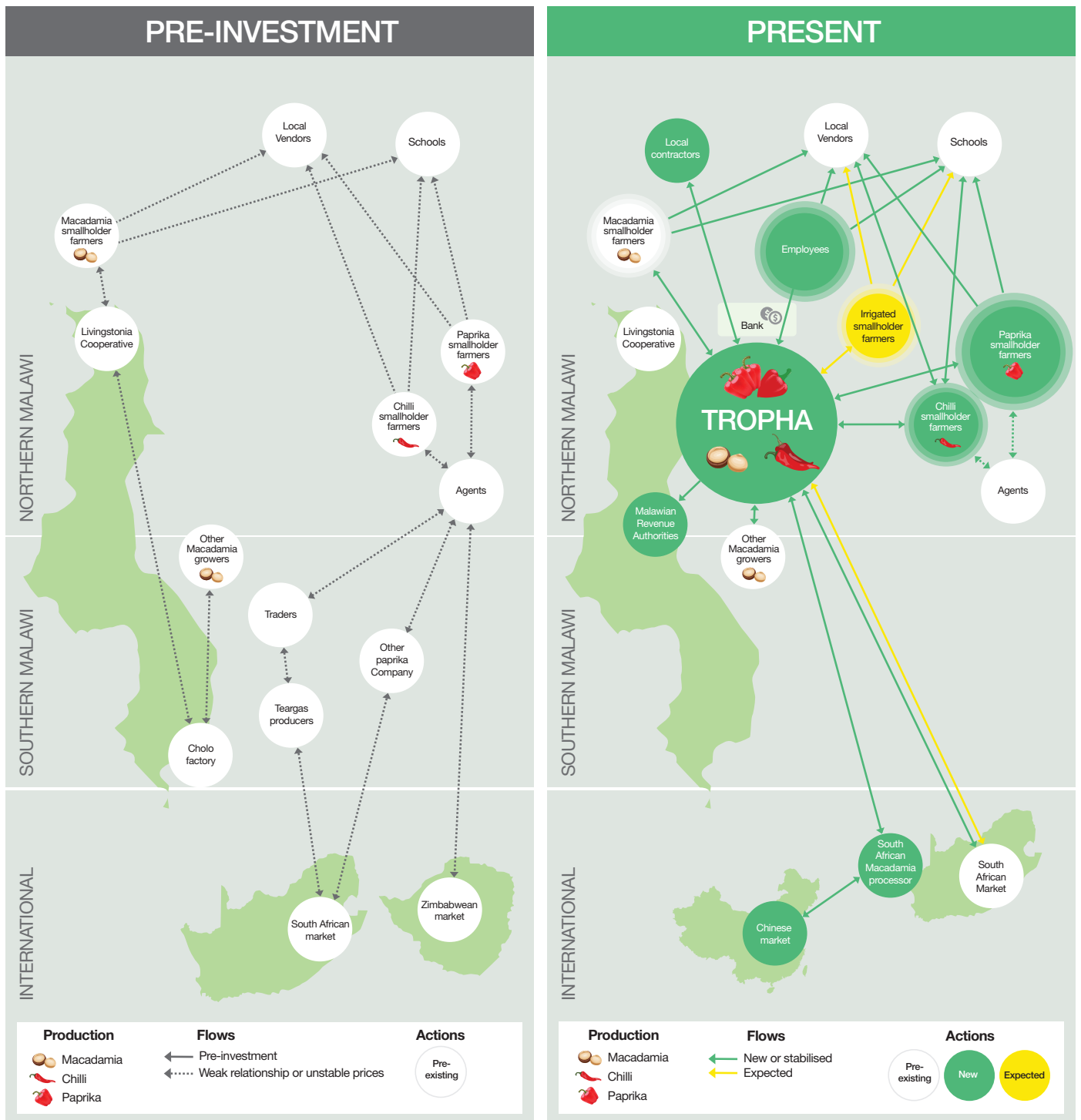
Following the establishment of Tropha, new linkages within the market have been created (shown in green in Figure 2), with many linkages also improving in quality (shown by the solid green arrows). **For smallholder farmers, their integration into their respective value chains has been strengthened:** nuts are now being bought directly from the smallholders, who are benefiting from better and transparent prices, a stable link to markets, and agronomic advice. Tropha uses their processing facilities to de-husk smallholder nuts along with their own production and that of some other producers, before sending them to South Africa for further processing and export (usually to China).

Likewise, Tropha buys, processes and markets crops from chilli and paprika farmers – some of whom are new farmers that have started to grow the crop because of the opportunity provided by Tropha. The processed spices are then sold on the South African market. In addition to working with smallholder farmers, Tropha has also formally employed workers from the local community to work on the two estates, creating a new group within the network. Due to their new or increased incomes, smallholders and employees are able to spend more on school fees or on goods from local businesses, strengthening these linkages. Tropha also directly contributes to the local economy by hiring local contractors such as electricians and construction companies.


Figure 2 also shows expected changes, represented by the yellow circle and arrows. In the future, Tropha plans to leverage their existing irrigation infrastructure to provide irrigation to smallholder farmers located on the edge of the Thulwe estate. This will bring additional farmers into this network, creating more and stronger linkages.



Figure 2: Network changes following AgDevCo's investment in Tropha







Tropha has had particular success in attracting women to enter the sector, with **56% of smallholder paprika farmers being women**. This has partly been achieved by promoting the idea that while men traditionally grow tobacco and hence control revenues from tobacco production, these crops represented a path to greater financial independence.



## EMERGING SIGNS OF CROWDING-IN

### NEW ENTRANTS

**New entrants are other producers that have entered the market following the investment's establishment. When their entry can be linked to the investment, it is evidence that it is contributing to the growth of the value chain.**

There is no evidence as yet of new competitors entering the market because of AgDevCo's investment in Tropha. However, there is growing interest in the sector within Malawi. In particular, some existing smaller growers have shown interest in the large scale, irrigated operations that Tropha is establishing. Coupled with strong demand for macadamia on the export market, the likelihood of new entrants in the medium term therefore appears strong.

Tropha does not only work with smallholders already growing chilli and paprika, but also encourages new farmers to start growing the crops in order to boost their supply. Many of these farmers have traditionally grown tobacco, which is becoming less attractive due to declining world prices and the recognition of the harmful health impact of the industry. Tropha has had some success in transitioning smallholders to chilli and paprika by providing seeds on credit, and has also provided training and demonstration plots.

### EFFICIENCY GAINS IN THE VALUE CHAIN

**Investments can lead to efficiency gains by providing a service or infrastructure to others in the value chain.** In Tropha's case, other Malawian macadamia producers who do not have their own processing facilities are able to take advantage of Tropha's infrastructure to get their macadamia harvests locally de-husked.

In the future, Tropha will also be able to provide the market with high quality macadamia seedlings, which are currently grown to complete the planting programme on the Tropha estates. There is already strong external demand (including from smallholder farmers) for these seedlings, and from 2020 Tropha will be able to supply these into the market, resulting in downstream producers becoming more competitive.

Leveraging off their existing irrigation infrastructure, Tropha is working with GIZ and AgDevCo to provide irrigation to smallholder farmers on the outskirts of the Thulwe estate, who are situated along the irrigation pipeline. In addition, Tropha will provide farmers with extension services and quality seeds, allowing smallholder farmers to produce higher value and more specialised varieties of chili and paprika.



Kissa, Esou and Chimwemwe, employees at Tropha



## EMERGING SIGNS OF COMMUNITY UPLIFT

Analysis of AgDevCo's investment portfolio has shown that transformational change generally starts to become evident from the third year of the investment. Given that Tropha is in the fourth year of investment, there are some emerging signs that the investment is likely to indirectly impact the communities in the region, benefitting more than just their employees and the smallholders with whom it is working.

### INCREASED SPENDING IN LOCAL COMMUNITIES

**Investments can boost demand for goods and services both indirectly, by paying wages to employees and purchasing crops from smallholders, and directly, by spending money in local businesses.**

Tropha directly impacts on the incomes of two distinct groups: smallholder farmers and employees. In 2018, the company paid more than \$530k in wages to employees, and purchased over \$190k worth of crops from smallholder farmers – over half of whom were women.

Most of Tropha's employees were previously subsistence farmers and without a formal income, meaning that their ability to purchase goods and services has been significantly improved. Smallholder farmers' have also experienced an increase in income due to better prices, increased production and quality. There were similar patterns in the key ways in which this additional income was being spent, almost entirely in the local business community:

- > **School fees:** Paying school fees was most regularly mentioned in focus group discussions as the key priority. Although primary schooling is now free in Malawi, there are still payments due directly to the school for infrastructure and supplies and secondary schooling needs to be paid for. There was some indication that before working to / with Tropha, some employees and farmers were unable to afford schooling for their children.
- > **Agricultural input retailers:** Encouraged by Tropha's emphasis on good farming practices, most smallholders reported spending additional income on quality inputs such as seeds, fertilisers and chemicals. Employees also reported buying increased amounts of inputs to grow their own crops for household consumption.
- > **Markets and small traders:** increased spending on more and better quality food products, including more expensive products such as tea, milk and sugar. Women also reported buying additional household utensils.
- > **Bicycle-taxis:** For employees in particular, transportation was a key expenditure item with many reporting using bicycle taxis instead of walking long distances to go to work.
- > **Building material supplier:** money was also commonly invested in housing upgrades, such as improving roofing from thatch to iron sheets.

More successful smallholder farmers were also able to hire farm labour, purchase motorcycles, and diversify their income by investing in livestock. The ability of employees and outgrowers to spend on these items did not only come from the additional income, but also from the fact that they were more financially secure and so willing to invest.

With just over 60% of additional income earned by men, the impact on local businesses is chiefly affected by male spending patterns. We did not however find significant differences in spending patterns between men and women, apart from some anecdotal evidence that men were more likely to make large purchases such as bicycles or motorcycles, or investing in livestock. Women were more likely to spend their increased incomes on household goods and food.

In addition to paying wages to employees and buying produce from smallholders, Tropha also directly contributed \$2.6M to the local economy by hiring local contractors (for example for construction and electrical work), and by buying inputs from local vendors. This kind of impact extends to services such as electricity usage, and the payment of taxes through the local revenue office.

Figure 3 illustrates how the increased spending by Tropha flows into local businesses through wages, smallholder income and direct spending, and the different types of good and services purchased.



The extent to which this increased spending will result in economic spillovers and the transformation of local businesses depends on how geographically concentrated this spend is. In the case of smallholder farmers, farmers tend to be relatively dispersed meaning that additional income being spent in each of their communities is therefore too little to trigger any kind of economic additionality. Where additional expenditure was occurring in a concentrated fashion, this was in a local economic centre where the overall increase was also unlikely to trigger business growth – exacerbated by the fact that farmers were unable to identify any specific businesses they now bought from. **Transformational economic impact is therefore more likely to come from Tropha employees**, who are more geographically concentrated around the estates, and so more likely to spend their additional income in the same places, or seek the same services. This is shown in Figure 4, which illustrates the geographic dispersal of the income paid by Tropha, with more money flowing into the areas surrounding its estates than in the smallholders' villages.

**Spillover effects are also limited by the fact that most additional income is being spent on school fees and not in local businesses.** However, as a result of this increase spending on school fees Tropha has indirectly contributed to increasing school attendance, which can be economically advantageous for communities in the long run, since a higher education levels can provide access to better employment opportunities.

Figure 3. Tropha's impact on increased demand for goods and services in Malawi

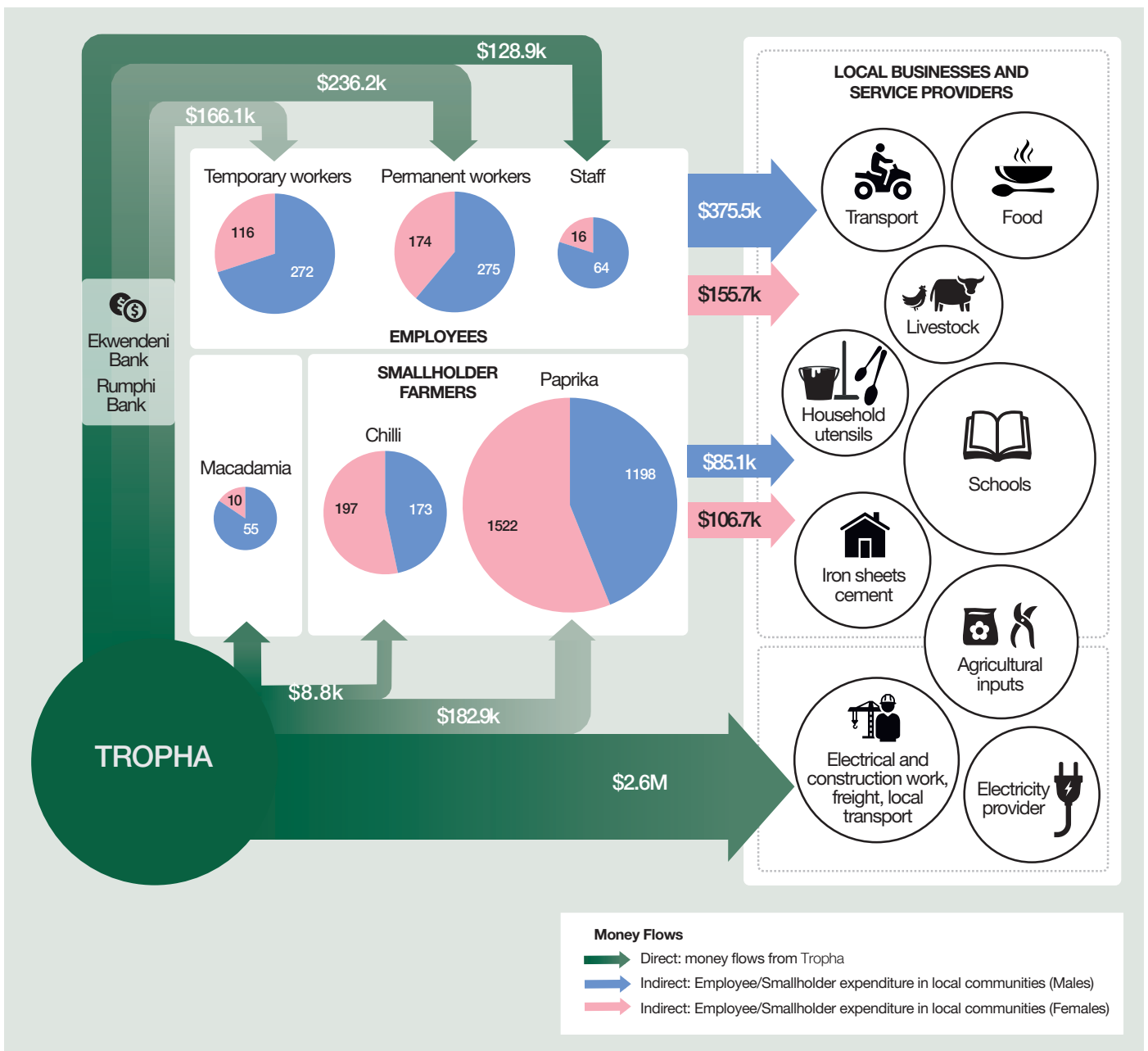




Figure 4. Geographical spread of Tropha’s income uplift

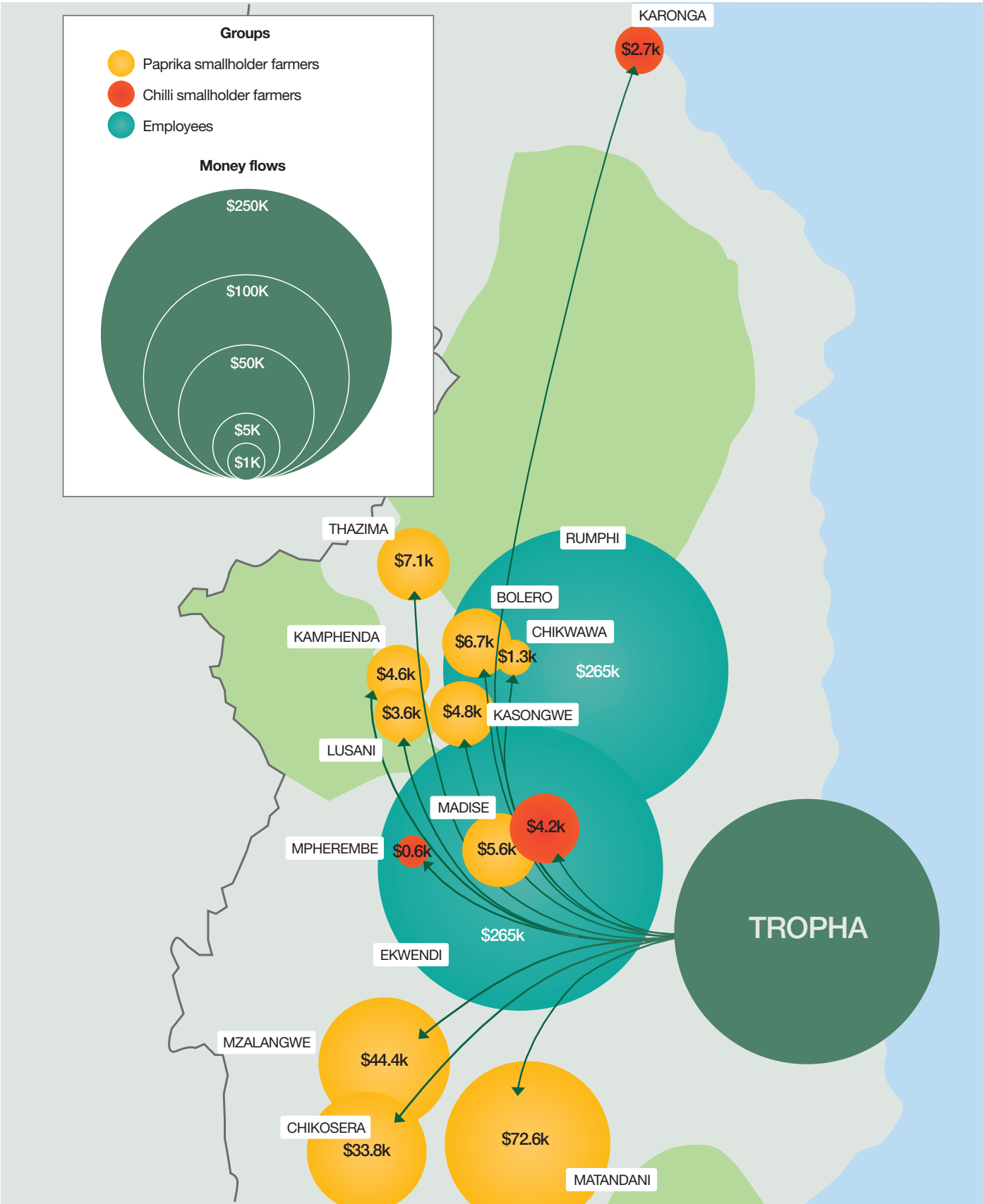


Figure 4 shows the geographical spread of income generated by Tropha. The size of the circle represents the amount of money flowing into each community at the village level. The blue circles show income generated through employment, and the yellow and orange ones for money paid to smallholders – excluding macadamia outgrowers.





## FORMALISATION OF EMPLOYMENT

**A movement into formal employment can have benefits other than increasing and stabilising income.** One unexpected finding **was that by formally employing their workers, investments can have an impact on financial inclusion**, further reinforcing financial security. Tropha pay their 449 permanent employees via a bank account, which for almost all employees is their first formal bank account. Although usage of other formal financial products is low, with employees not currently using their account to save money or accessing loans, access has been enhanced and forms a foundation for increased usage in the future. This has also stimulated access to financial infrastructure, with the installation of two ATMs in Ekwendeni (bordering Tropha's Kaweche estate) directly attributable to the increased demand arising from the fact that Tropha pays all wages into bank accounts







# CONCLUSION

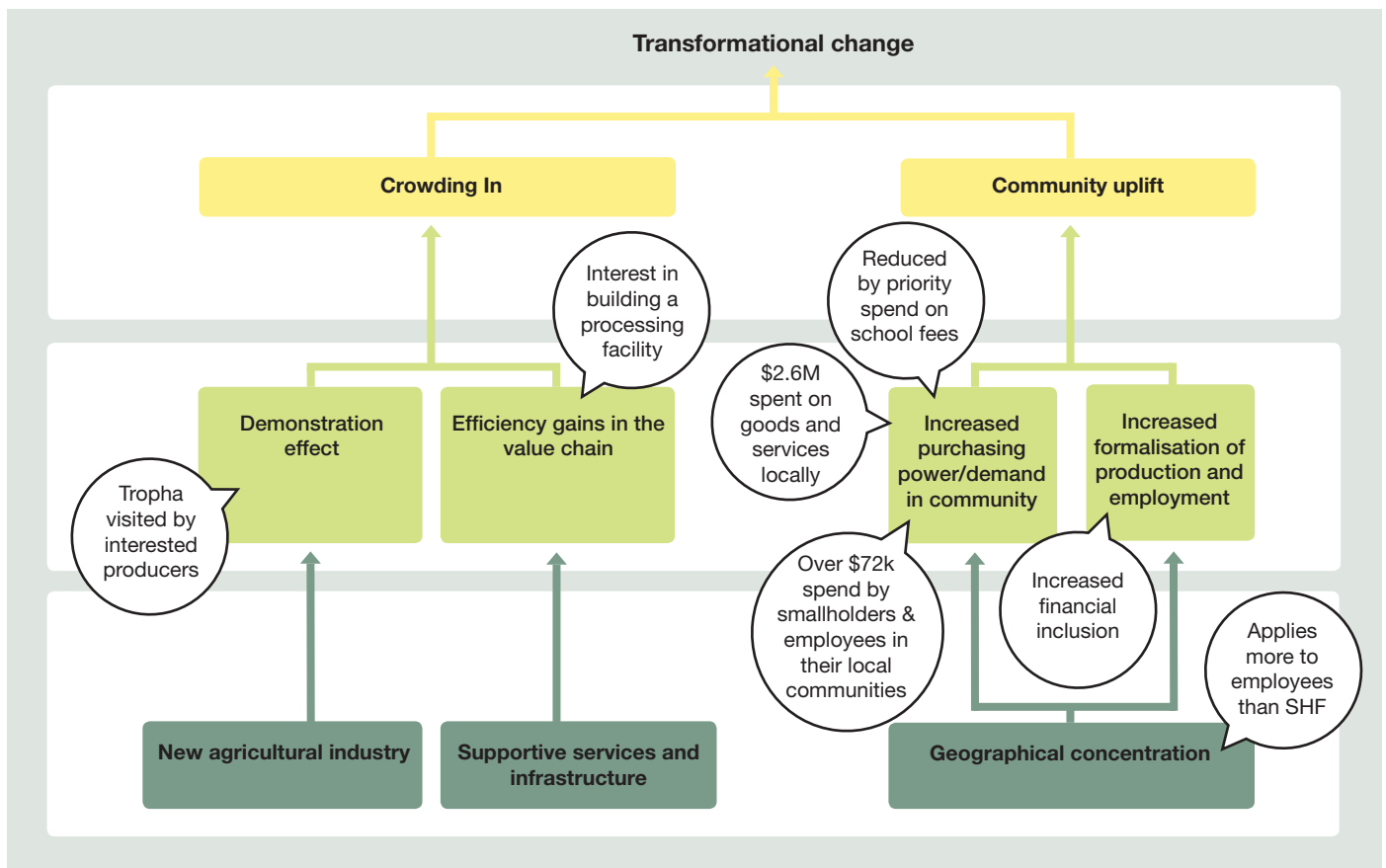
AgDevCo is pushing the boundaries of impact measurement by testing ways to systematically capture knock on effects of investments. This case study has helped to validate some of the underlying hypotheses behind investing in transformational change. Lessons from this case study and a broader review of the AgDevCo portfolio are being used to refine the way in which AgDevCo assesses investment opportunities and tracks its impact.

Four years after the first disbursements were made to Tropha, evidence of transformational change has started to emerge. While there is limited evidence of crowding in, there are encouraging signs of emerging value chain impacts as other commercial players show interest in Tropha's high intensity irrigated model. There were also some signs that Tropha's production could catalyse future investments in macadamia value-addition and lead to efficiency gains.

Tropha however provides particular insights on the mechanisms underlying community uplift. Crucially, in rural areas geographic concentration is key, with income uplift of employees more likely to lead to community transformation than smallholders, who tended to be more dispersed. This case also highlighted the fact that increased incomes are not necessarily spent in businesses, but can go towards public services such as education. While this limits spill-over effects it benefits the community in other ways. Finally, Tropha's case also highlights how AgDevCo's investments can contribute towards financial inclusion.

Figure 5 summarises the logical pathway from Tropha's investment level changes to the expected transformational impact, as well as the emerging evidence gathered.

**Figure 5. Tropha's path to transformational change**





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