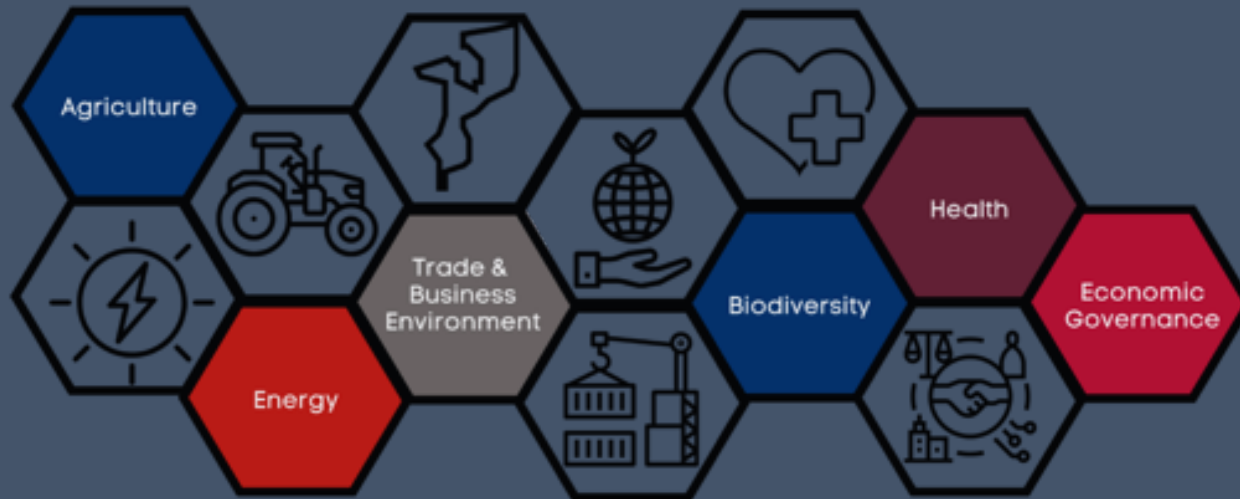


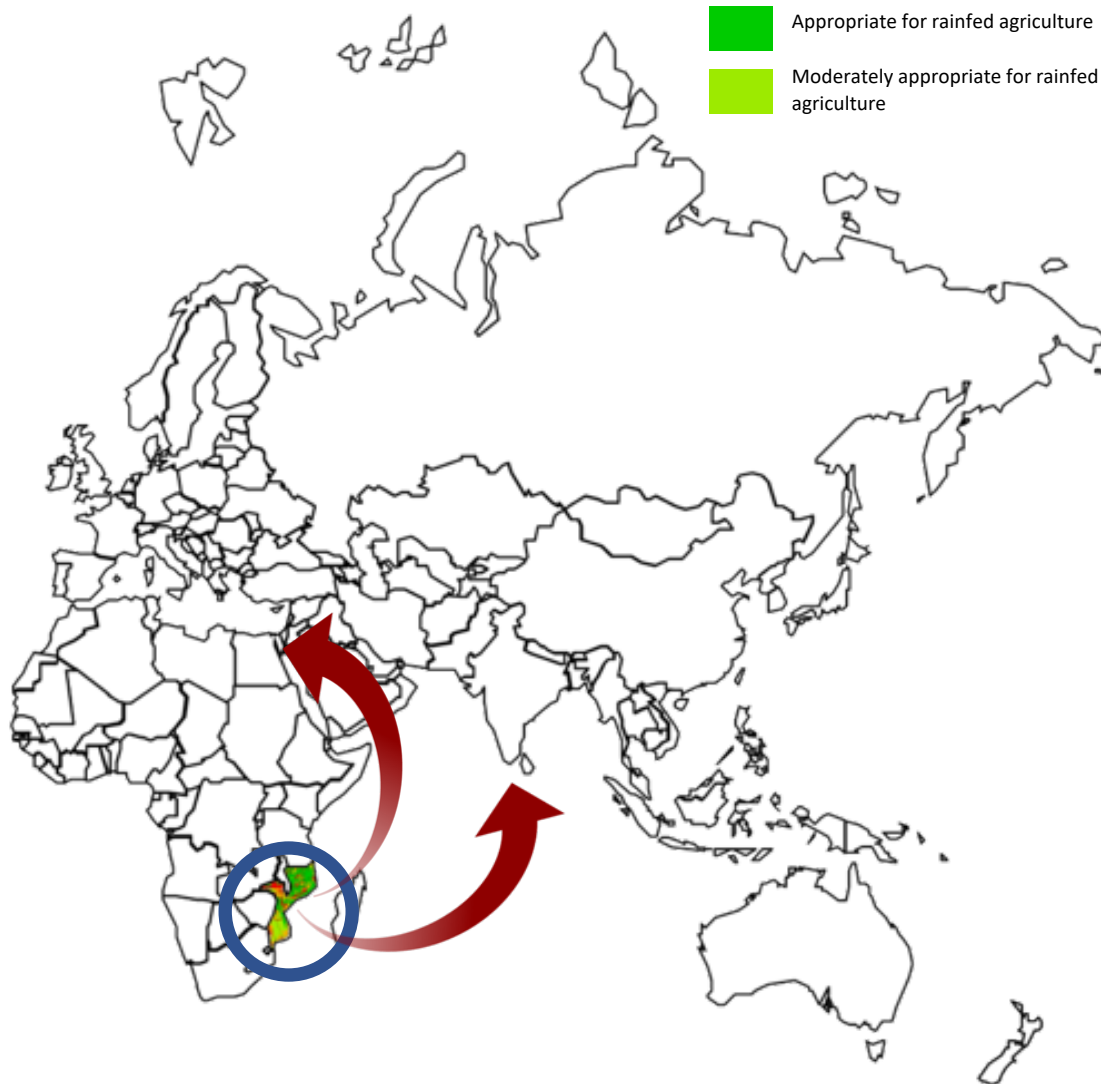
Banana and Fruit Exports from Nacala



Supporting the Policy Enabling Environment for Development (SPEED)

December 2021

Mozambique has many characteristics that could make it a great agricultural exporter



- Natural gateway to the Middle East, Mediterranean, and Asia
- Neighbor to regional markets such as South Africa, Zimbabwe and Malawi
- Many ports along coastline - Port of Nacala is the largest deep-water natural harbor on the East African coast
- Abundant water supply combined with diverse micro-climate supports a wide range of agricultural commodities

Due to its location in the Southern hemisphere, Mozambique is counter-seasonal to Northern hemisphere suppliers

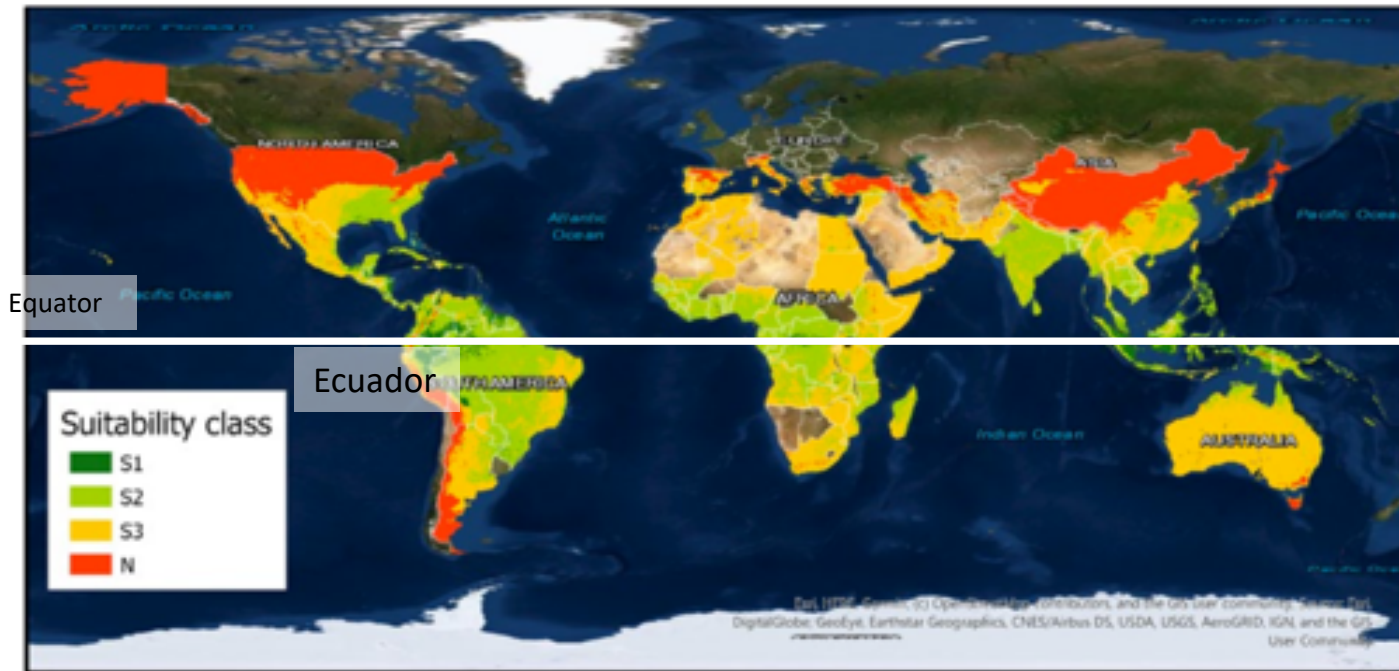
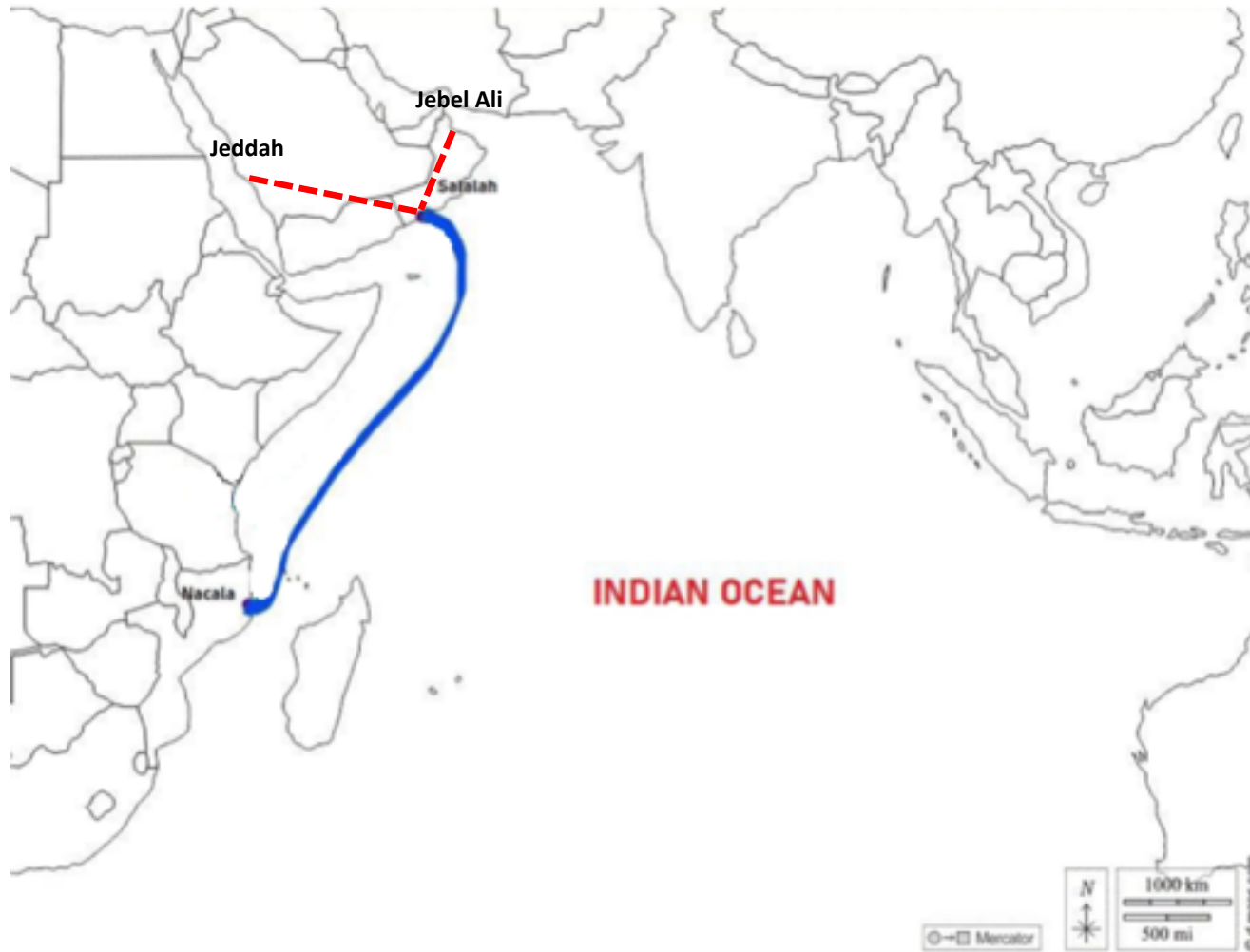


Figure 8. Global suitability map for banana. Suitabilities are only shown for countries that produce banana.

Bananas are grown within 30 degrees either side of the equator. Mozambique, due to its location, further south, is a counter-seasonal country (such as Ecuador) to Northern hemisphere producers (Central America, Southeast Asia), and its peak harvest would take advantage of the higher prices due to lower global supply.

Mozambique is also counter-seasonal to India and Pakistan's mangoes, and potentially to other crops, such as dragon fruit.

Opening of roads from Salalah to Saudi Arabia and UAE puts Mozambique at a competitive advantage to serve markets in the Middle East



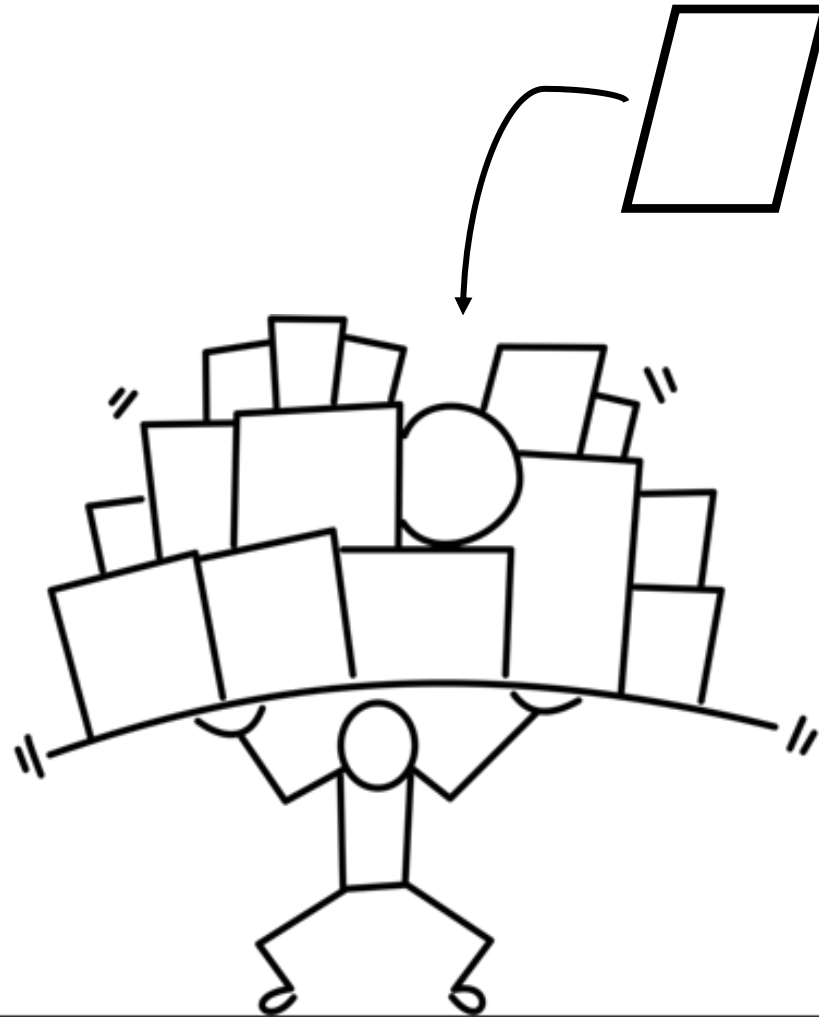
A new road connecting Oman to Saudi Arabia has opened, which cuts driving time by 16 hours. The distance from Salalah to Jebel Ali is now about 1400km and from Salalah to Jeddah around 1800km. Travel time on land is now much shorter than the waiting time in Salalah plus shipping time to the ports of Jebel Ali or Jeddah (which would take days).

This *ship to Salalah /road transport combination* is a really important point as it gives us the quickest delivery time to Jeddah(Saudi) and Jebel Ali (UAE) of any competing banana source.

However, Mozambique faces some challenges

Situation

- Low export volumes
- Unreliable shipping service
- Not located on the path of any standard shipping route
- Competition from other tropical countries in terms of attractiveness for agricultural investors, such as Tanzania, Cambodia, etc.



Complication

- Global shipping container shortage → shipping lines went from unreliable to virtually non-existent
- Extremist insurgencies in the North → together with lack of logistics solution, this further discouraged new investors

Covid-19 exacerbated a global shipping crisis with no short-term solution in sight

The image displays three overlapping screenshots of news articles related to the global shipping container shortage crisis. The top screenshot is from SHIP TECHNOLOGY, featuring the article "Global shipping container shortage: the story so far" by Frankie Youd, dated 29 Apr 2021. The middle screenshot is from CNBC, titled "An 'aggressive' fight over containers is causing shipping costs to rocket by 300%", published on Jan 24 2021, by Weichen Tan. The bottom screenshot is from HDI, titled "Container and shipping shortages: Pandemic effects in global logistics", with a sub-header "Container and shipping shortages".

SHIP TECHNOLOGY
ANALYSIS
Global shipping container shortage: the story so far
By Frankie Youd | 29 Apr 2021

CNBC
WORLD ECONOMY
An 'aggressive' fight over containers is causing shipping costs to rocket by 300%
PUBLISHED SUN, JAN 24 2021-8:58 PM EST | UPDATED MON, JAN 25 2021-9:53 AM EST
Weichen Tan @WEICENT

KEY POINTS

- Shipping costs have skyrocketed as desperate companies wait weeks for containers and pay premium rates to get them, according to industry watchers.
- Ikea's Singapore operations called it a "global transport crisis" and estimates 850 of its 8,500 products are affected by shipment delays.
- Chinese tech giant Alibaba's logistic arm Cainiao launched a container booking service last week in response to the global shortage.

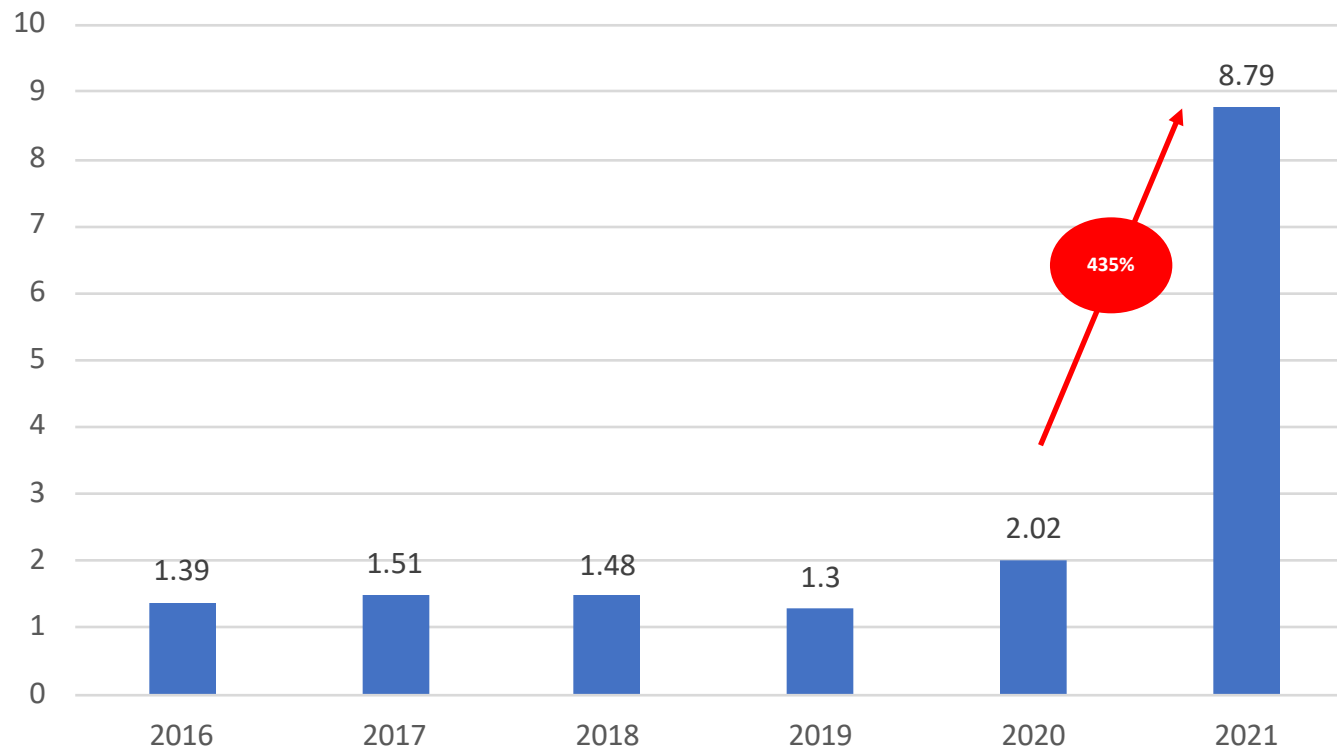
TRENDING NOW

- A longevity or the 'non-neg exercise and he lives by! life
- Delta Air charge u employ month insurw

HDI
Container and shipping shortages
Container and shipping shortages: Pandemic effects in global logistics

Ocean freight price in July 2021 rose more than 4 times compared to July 2020

International maritime freight index (US\$, thousand per 40ft container) - World Container Index



While we may believe that the shortage is temporary due to the pandemic, industry experts do not think there is a solution in the near future.

Furthermore, logistics has always been a challenge for Mozambican fruit exporters even before the shipping crisis due to their initial low export volumes and the fact that Mozambique is at a geographical disadvantage as it is not on the path of any standard shipping route.

Some bigger companies, such as Home Depot and Loctek, have started contracting own container ships

The screenshot shows a Business Insider article. At the top, there is a navigation bar with a menu icon, a search icon, the word "INSIDER" in the center, and a "Subscribe" button on the right. Below the navigation bar, there is a breadcrumb trail: "HOME > TRANSPORTATION". The main headline of the article is "A furniture company is shelling out \$32 million to build its own cargo ship in an effort to sidestep the supply-chain crisis". Below this, the author's name "Grace Kay" and the date "Feb 1, 2022, 10:03 AM" are visible. The article is categorized under "RETAIL". The main title of the article is "How bad are global shipping snafus? Home Depot contracted its own container ship as a safeguard". Below the title, it says "PUBLISHED SUN, JUN 13 2021-8:00 AM EDT | UPDATED MON, JUN 14 2021-9:05 AM EDT". The author's name "Melissa Repko" and her Twitter handle "@MELISSA_REPKO" are listed. There are social media share icons for Facebook, Twitter, LinkedIn, and Email. A "KEY POINTS" section is visible at the bottom left, with one bullet point: "Home Depot has reserved its own ship, bought merchandise on the spot market and flown in power tools as it copes with supply chain headaches." On the right side of the article, there is a large image of a cargo ship with a stack of colorful shipping containers on its deck. The image is partially obscured by a grey L-shaped graphic element.

Unreliability and delays at ports are even more harmful to exporters of fruit and other perishables, as they reduce the green life and impact the overall quality of the exported product.

Source: <https://www.cnbc.com/2021/06/13/home-depot-contracted-its-own-container-ship-to-avoid-shipping-delays.html>
<https://www-businessinsider-com.cdn.ampproject.org/c/s/www.businessinsider.com/furniture-company-loctek-building-cargo-ship-supply-chain-crisis-2022-2?amp>

A solution that promotes the sustainable development of Mozambique is fruit exports



Leveraging Mozambique's land and climate and potential for counter-seasonal production



Select crops based on agricultural suitability, market demand, income generation for smallholder and jobs for men and women



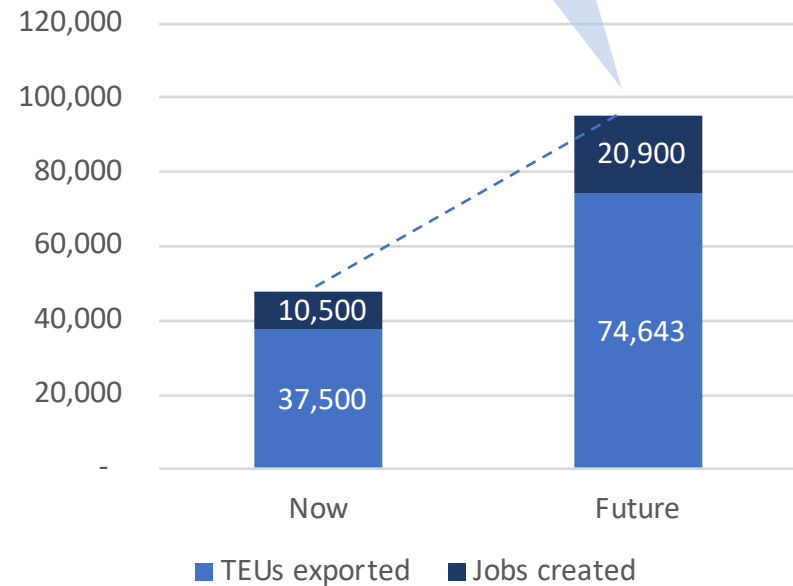
Attract investors that can couple agricultural investments with a shipping solution

For example, suitable land for bananas in the North has the potential to create 10,400 jobs

Each hectare of banana creates jobs for 1.3 people.

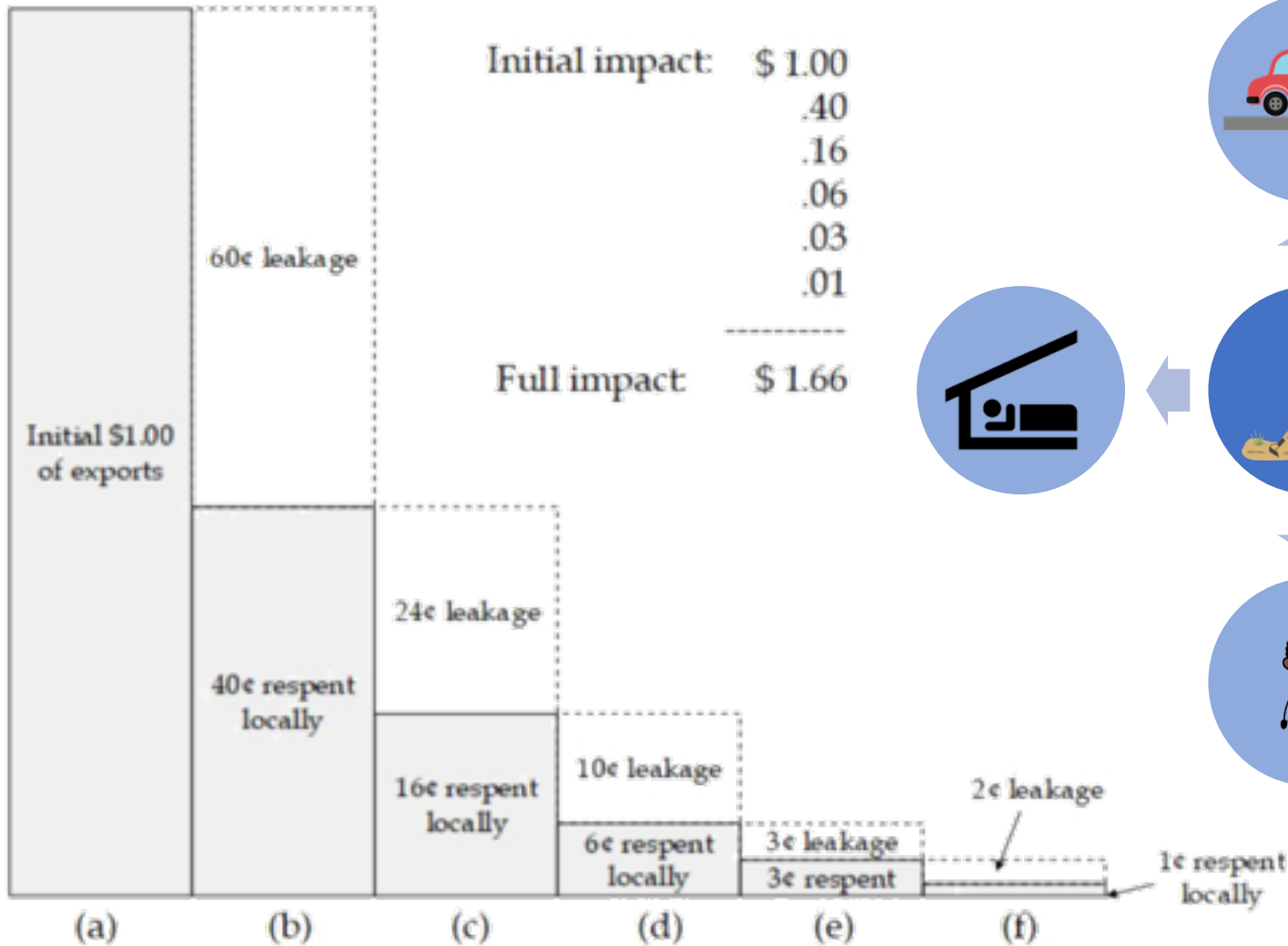


Additional 2000ha of suitable land for bananas near Nacala and 6000ha near Mocimboa da Praia have the potential to create 10,400 more jobs.



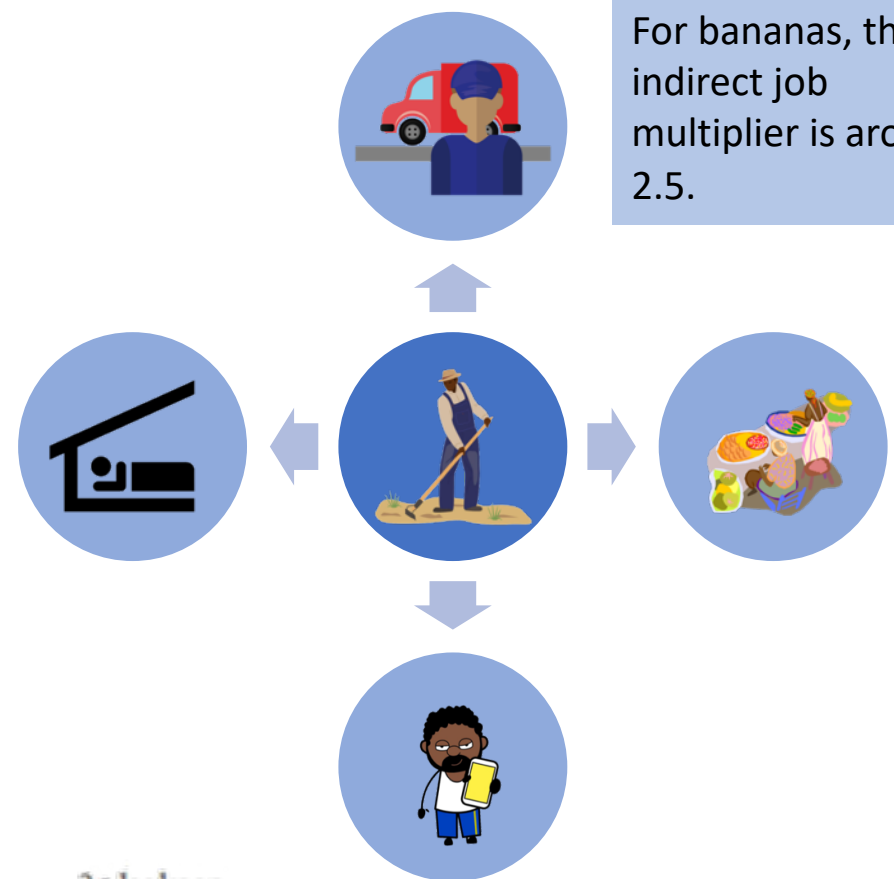
And many more indirect job opportunities are created through the multiplier process

A picture of the Multiplier Process



Initial impact: \$ 1.00
 .40
 .16
 .06
 .03
 .01

 Full impact: \$ 1.66



For bananas, the indirect job multiplier is around 2.5.

Crops of interest may be grouped under three major categories: for export, processing, or domestic markets

Category	Rationale	Top choices
Fresh fruit for export	<ul style="list-style-type: none"> • Taking advantage of Mozambique's production peaking in the off months of Northern hemisphere (counter-seasonality) • Location near markets such as Middle East and Europe • Packing stations for export generally create more jobs for women 	Banana, mango, avocado, lychee, pineapple, melon, dragon fruit
Processed products	<ul style="list-style-type: none"> • Shorter time required to set up processing plant (compared to waiting from planting to harvest) • Products are not as perishable as fresh fruit • In certain cases, processing can create more profit and job opportunities for women 	Cashew, coconut, mango, aloe vera
For domestic market	<ul style="list-style-type: none"> • Can also create jobs and profit • Less vulnerable to global shipping crisis • A truck going south with an agricultural product for local or regional markets, could also be a truck going to the port of Pemba or Nacala with products for export, thereby lowering the unit transportation cost 	Non-fruit such as soy, pigeon pea, etc.

Two current major fruit exporters, Jacaranda and Westfalia, face challenges to their expansion



- Jacaranda Agricultura has taken up an anchor investor role for bananas in the north, with over \$40 million invested, taking over from Matanuska that suffered from Panama Disease and high leveraging.
- Has played a leading role and is pioneering research and efforts to tackle the spread and impact of the Panama TR4 disease affecting bananas in the region.
- This anchor investor is essential as it not only signals to other potential agriculture investors that Mozambique is an attractive location for ag-investment, but also helps develop the fruit value chain in the north, thus driving up export volumes to attract shipping lines to make Nacala a port of call.



- Leading multinational supplier of fresh fruit and related products to international markets.
- Already growing avocados and lychees in Manica region, with expansion planned.
- Currently shipping production South to Johannesburg by truck.
- Could be interested in investing in avocados in Lichinga were it not for logistic challenges.
- Interested in exporting to India and China.

Current constraints

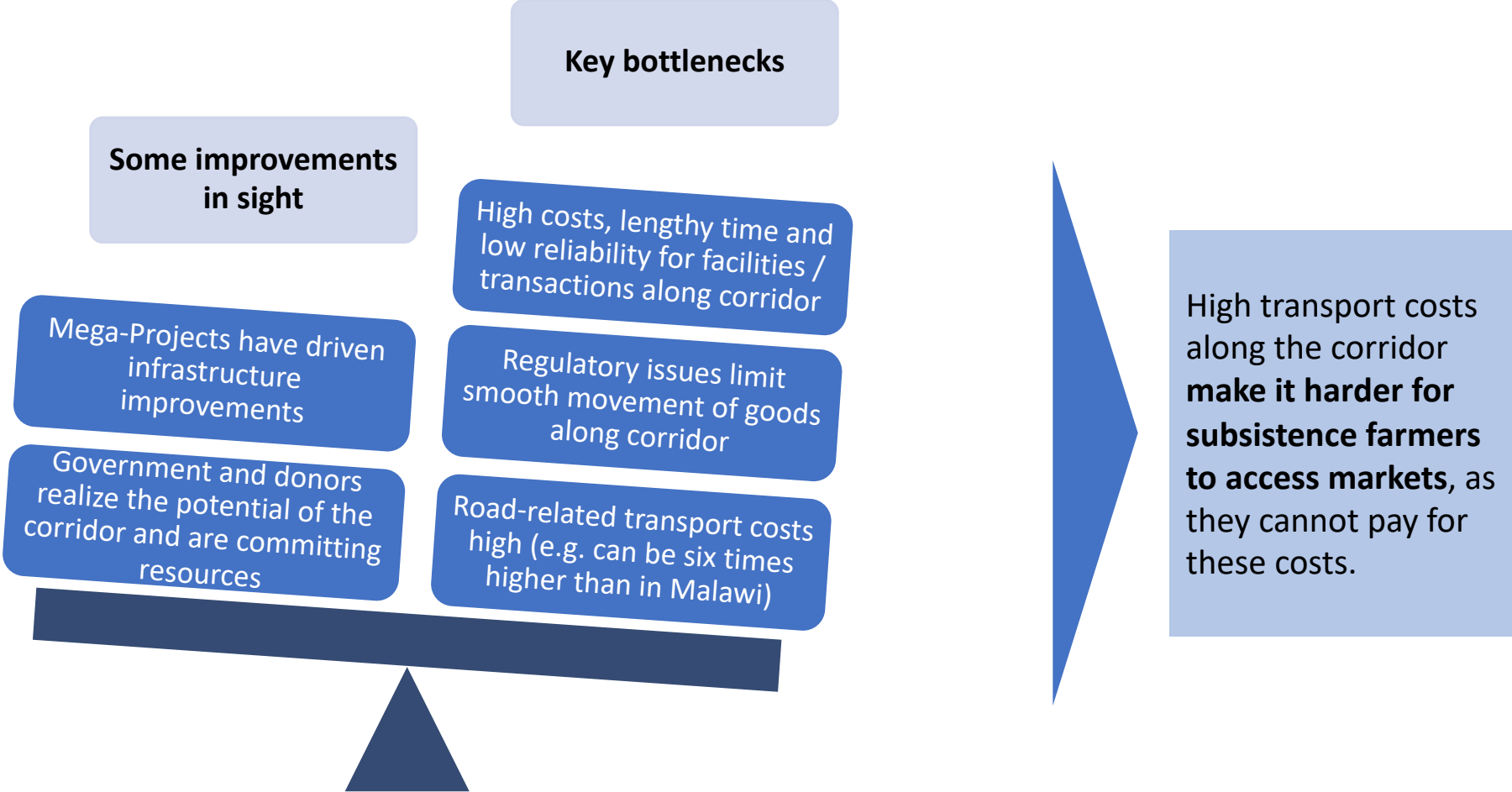
- Cannot export its bananas as there is only one ship to Singapore out of Nacala, and Singapore does not need more bananas at the moment (sourcing them from Cambodia) → **needs weekly shipping service to the Middle East**
- Cannot export to China as there are no trade agreements establishing export of avocados or lychees to the country → **requires government-to-government trade agreement to expand its market and production**

In order to support Jacaranda and Westfalia, and attract new investors to Mozambique, a logistic solution has to be in place



No logistics solution means no new investors for export fruits.

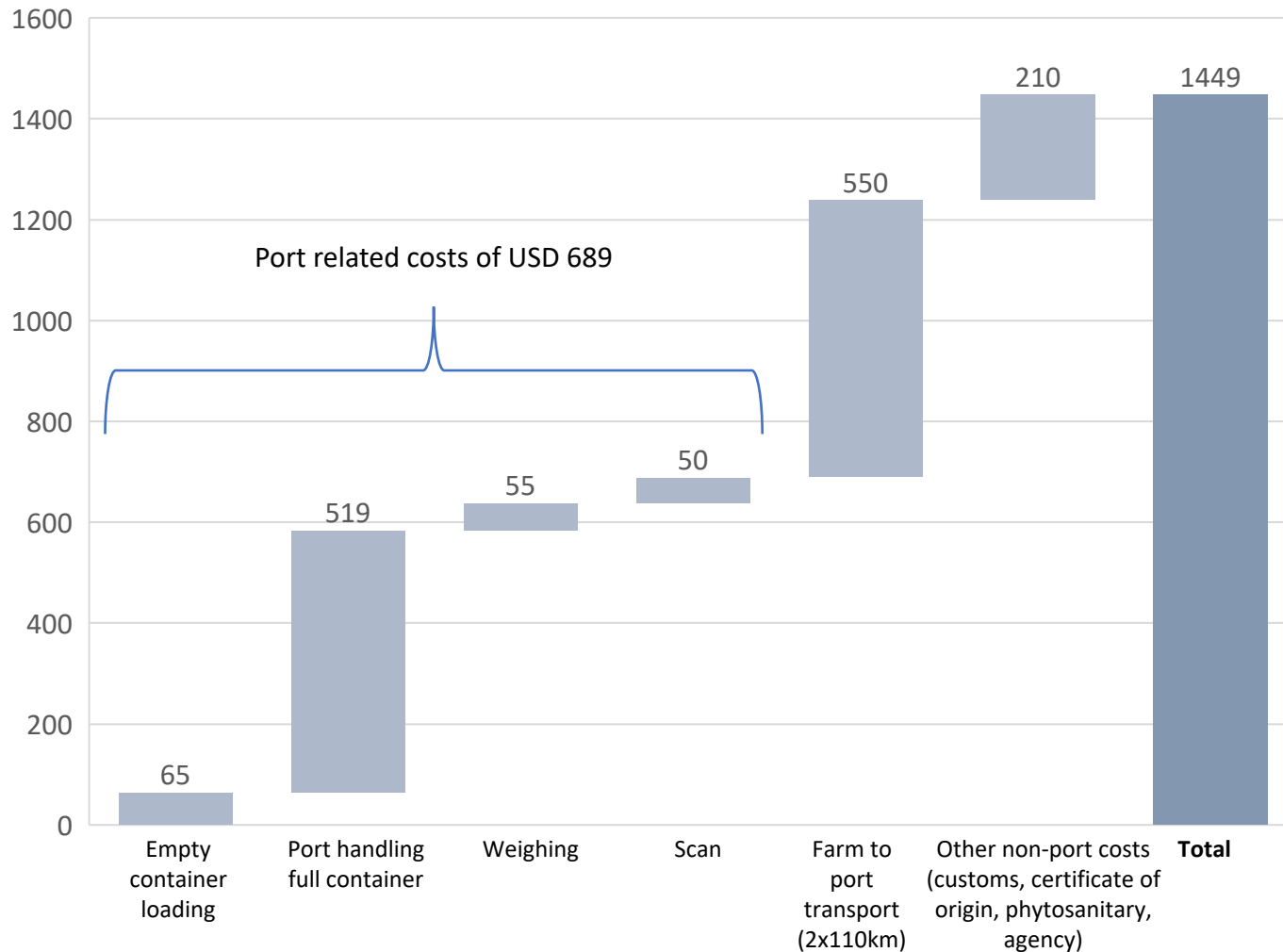
However, Nacala corridor logistics has been a challenge



Source: SPEED+, Nacala corridor and port performance assessment, USAID, February 2018 Draft Final Report

Logistics costs alone can cancel Mozambique's advantage as low-cost producer of tropical fruit

Nacala terminal handling costs per 40' reefer (USD)



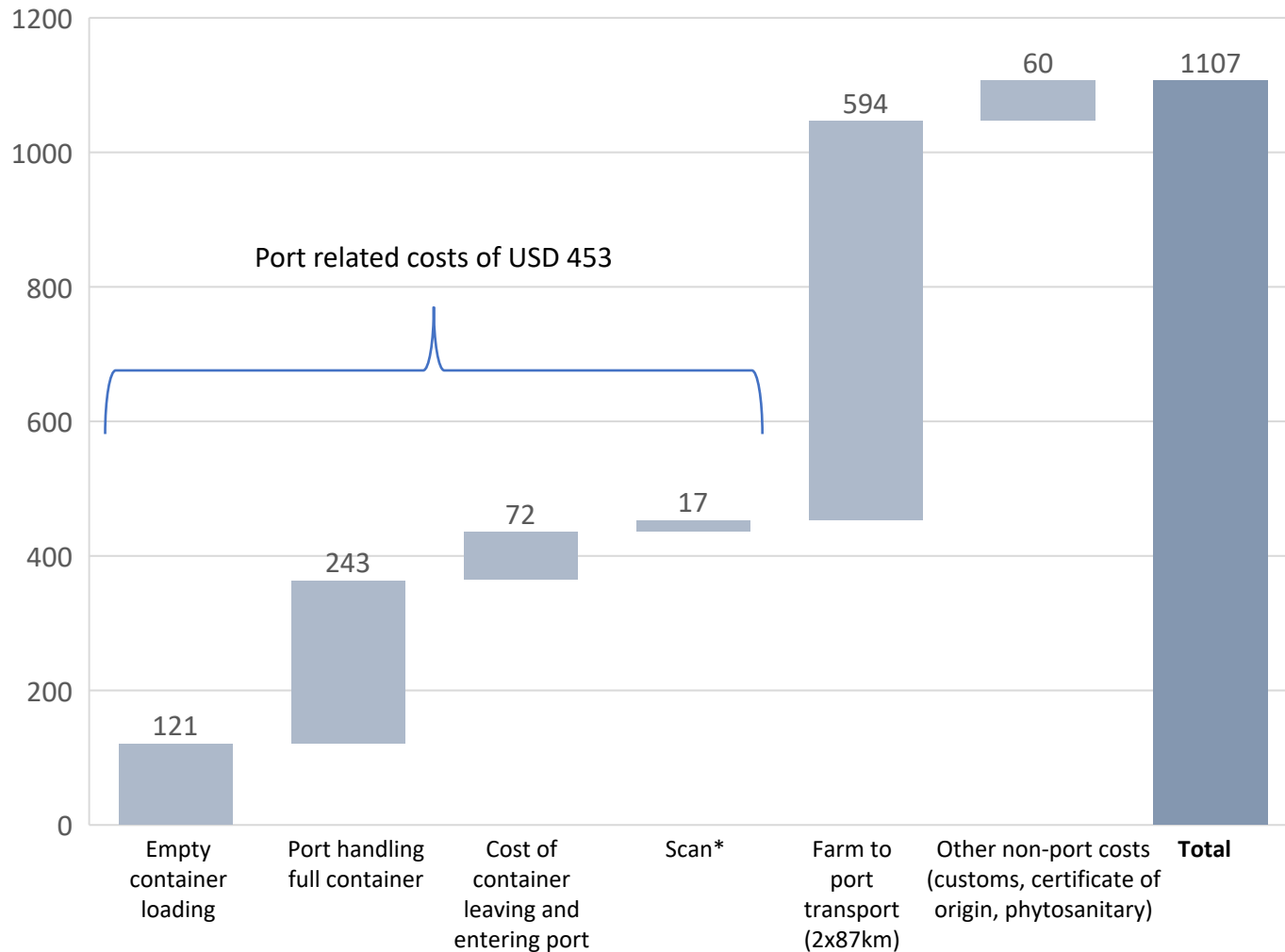
Compared to port of Guayaquil (Ecuador), where exporting a reefer costs USD400, Mozambique's costs of USD1450 offsets the potential agro-climatic and geographic competitive advantage.

For bananas, this additional USD1000/container is equivalent to \$1/box that is cut from the producer's margin. All the savings at farm gate are lost by costs at the port.

A reduction in costs of USD1000/container would mean USD 20MM/year that could be converted to smallholder income (as traders would be able to pay more for the inputs).

For example, in Santa Marta, Colombia, a port similar in size to Nacala that handles bananas and other mixed cargo, port and non-port related costs are lower

Santa Marta terminal handling costs per 40' reefer (USD)



While Guayaquil is the largest port that exports bananas, Santa Marta in Colombia exports both banana and other cargo, and its region's banana potential is comparable to that of Nacala's.

Compared to Santa Marta, exporters from Nacala have to pay more for both port and non-port related costs.

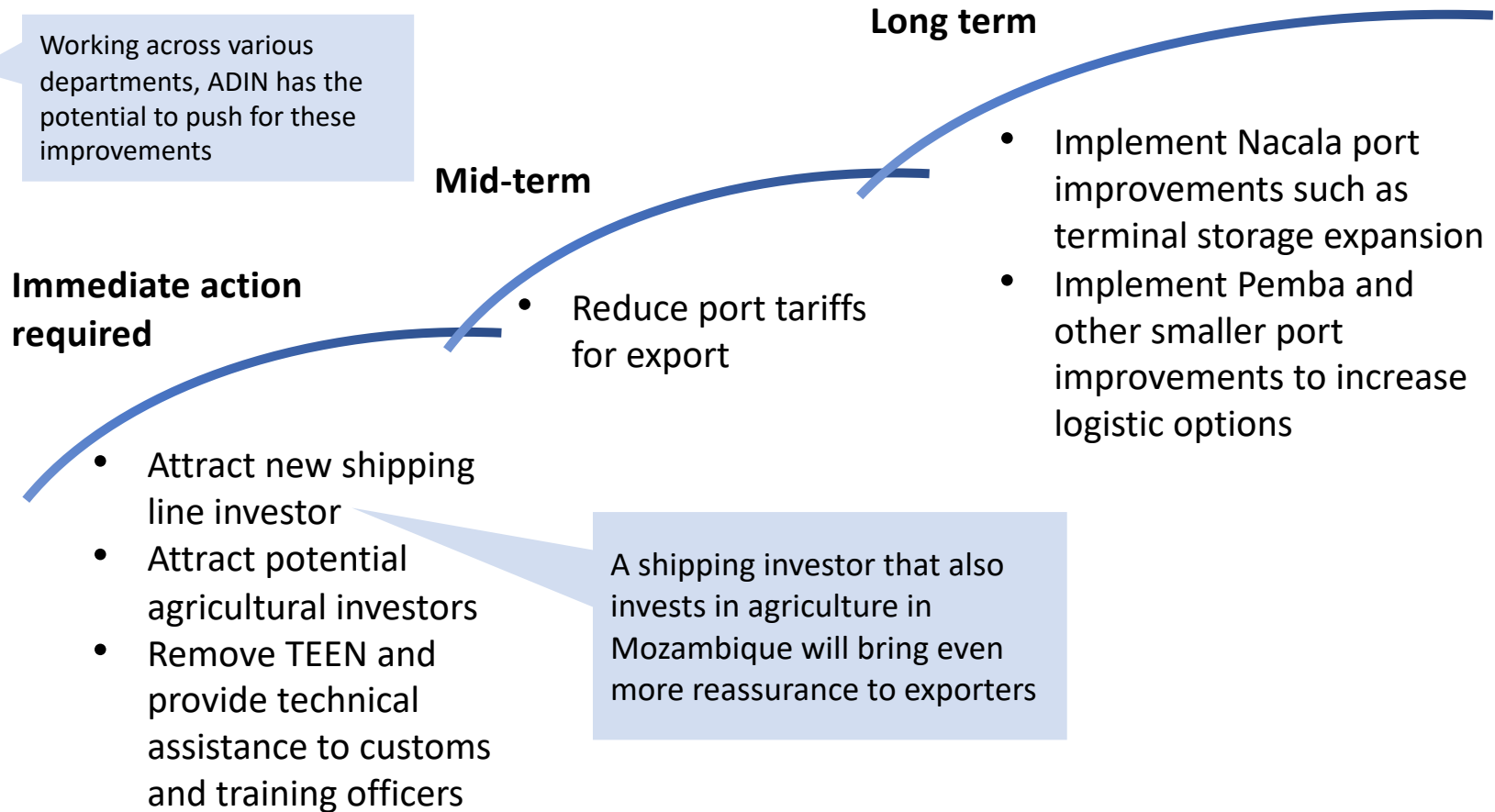
Disregarding farm to port transport cost, the other export costs such as phytosanitary and customs add up to 12% of total export costs in Santa Marta, while in Nacala these corresponding fees total 23% of total export costs.

*Around 20% of the containers may require additional scan, at the cost of USD 85 to the exporter (antinarcoctic police requirement)

Short, middle and long term improvements are required to strengthen logistics



Working across various departments, ADIN has the potential to push for these improvements



Rationale

- Without ships, there is no way to deliver product to market
- TEEN already a hindrance to current exporters
- While it is important for port tariffs to be competitive, it's not a major concern of current exporters
- With increased export volumes Nacala's storage problem will be an issue
- With the improvement of other smaller ports, it will keep major corridors competitive and also improve Mozambique's resilience against climate change

Joint pressure from civil society, producers and donor sector can help improve port competitiveness

Port of Pemba has higher visibility now
due to:

- mining companies in Cabo Delgado
- shorter transit time to destination in Middle East for fruit exporters

Producers with own shipping solution
will reduce their susceptibility to:

- port call cancellations by major shipping lines
- port inefficiencies and high fees

Pressure from civil society and donor sector:

- when port costs go up, smallholders lose income as traders pay them less for their product
- increase or decrease of exported containers directly impacts the creation or loss of jobs

**Alternative
ports such
as Pemba**

**Private
sector
choice**

**Civil
society
pressure**

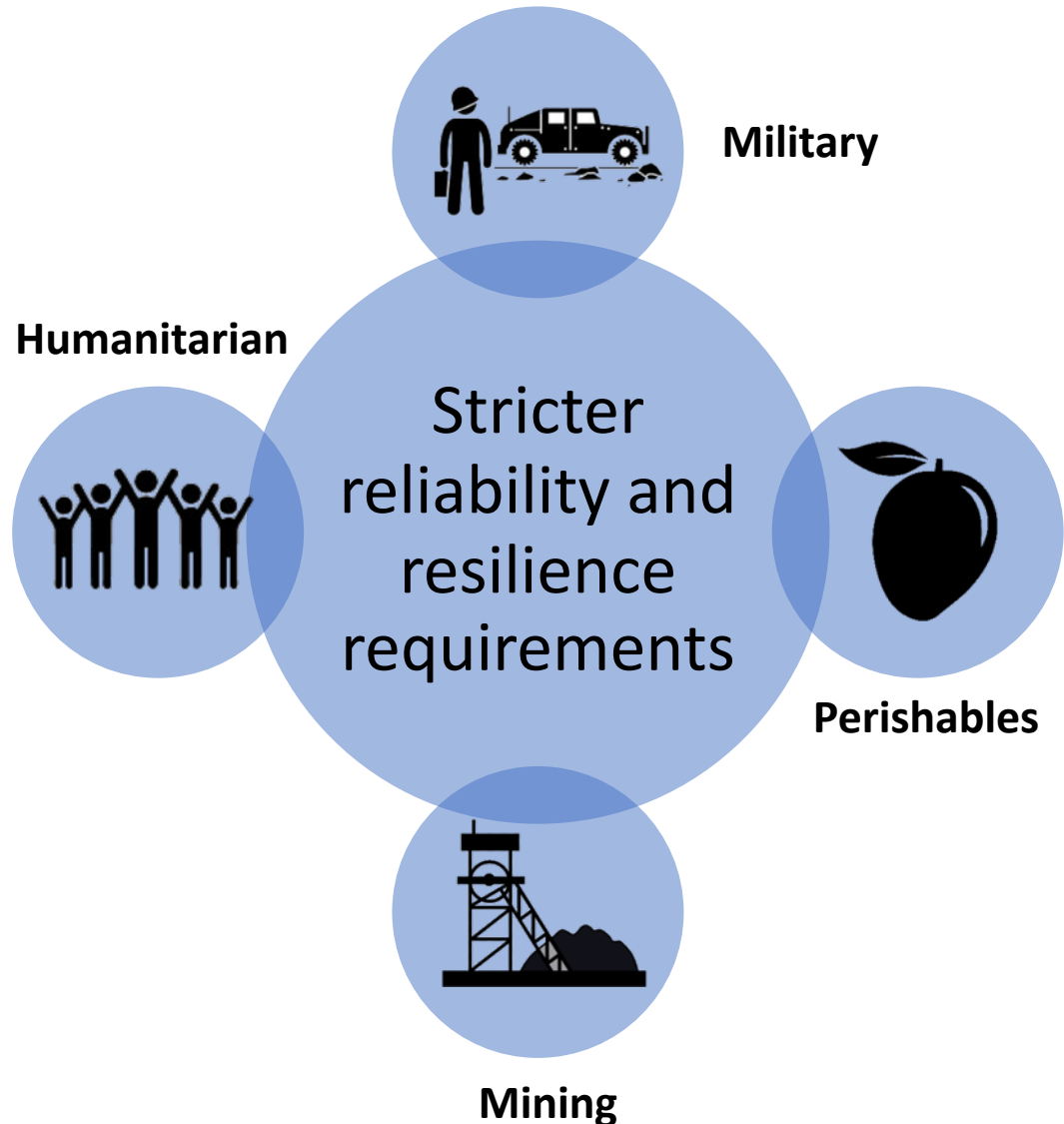
**Joint pressure to
lower
port costs and
improve their
efficiency**

The global crisis has made explicit the need for change in the shipping industry and also created an opportunity

Many sectors with specific needs value reliability and resilience over economies of scale.

What is common to all sectors:

- have critical timing issue
- value reliability and resilience
- are willing to pay a little more for specialized services
- may require flexible logistic arrangements



There is a growing demand for specialized shipping companies

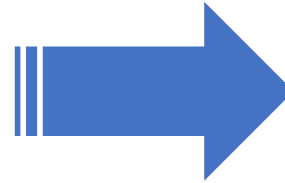


Commodity shipping service

Benefits of economies of scale:

- Reduced long-term unit costs
- Increased profits, higher return on capital investment
- Ability to offer lower prices
- Larger business scale gives more negotiation power with customers and port authorities

However, what has been observed during the global crisis are large lines providing unreliable service, breaching contracts and running off to highest profit routes.



Tailored, value-added service

Benefits of specialization:

- Better value proposition for your target markets (reliability)
- Smaller learning curve due to focus on specific niches
- Able to capitalize on niche opportunities or start-up markets
- Higher customer loyalty
- More opportunities for building profitable relationships

For Mozambique, a route through Pemba/Nacala to Salalah can send fruit to the Middle East and bring backhaul



A US flag for the fleet will allow for more business opportunities such as military cargo

Pemba

Advantages of leaving from Pemba in lieu of Nacala:

- Lower port costs
- Shorter maritime trajectory to destination, hence cheaper



Salalah

Strategically located directly adjacent to the central East-West Shipping Lane, Salalah provides the region's fastest access point to the broader Middle East, Indian subcontinent, and East Africa. In addition, the Port is situated well away from the Straits of Hormuz – reducing carrier insurance premiums and overall freight costs.

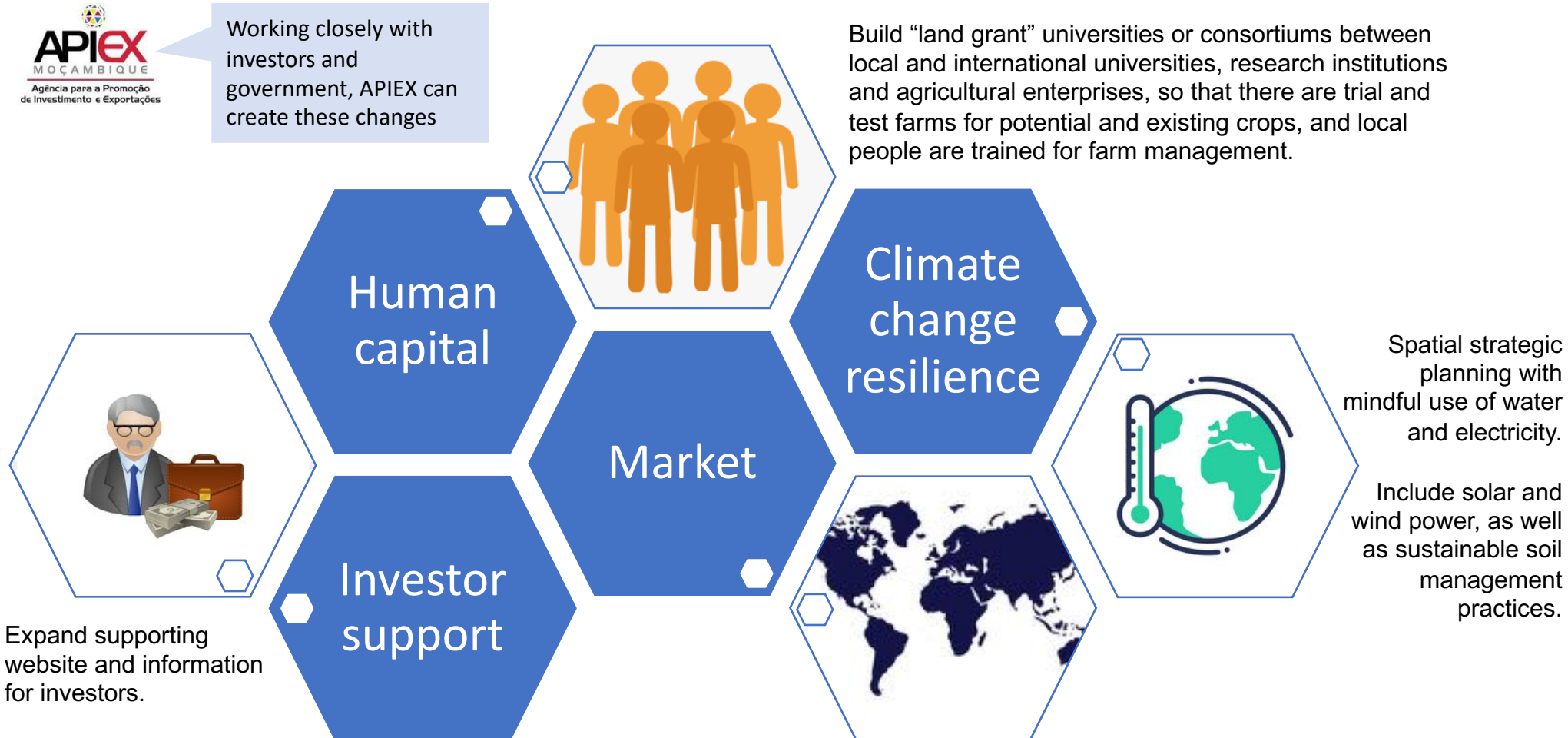
Possibility of completing this route with 3 to 4 ships, each on a 21-day circuit, in order to provide a weekly service.

Policies in other dimensions outside of logistics may also support Mozambique's agricultural growth



Working closely with investors and government, APIEX can create these changes

Build “land grant” universities or consortiums between local and international universities, research institutions and agricultural enterprises, so that there are trial and test farms for potential and existing crops, and local people are trained for farm management.



Spatial strategic planning with mindful use of water and electricity.

Include solar and wind power, as well as sustainable soil management practices.

Improve trade agreements with China and India.

Put Mozambique in the world fruit map (e.g. “Fruit Logistica” trade show).

Expand supporting website and information for investors.

Set minimum price for cashew and study whether there is a need for minimum price in other crops.

Thank You!
Obrigado!

