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ENGLISH

Guide to Honey, Pepper, and Fish Crackers of Bangka Belitung Archipelago

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products



ANGIN IMPACT 2019

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Overview

You will see a colorful landscape in the islands of Bangka Belitung! Brown plantation, brickred soil, white sand around the coastline, green kaolin lake, and blue color of the sea.

Beyond the colorful landscape, Bangka Belitung has a long history far older than the Republic of Indonesia. Mining and agriculture are closely related to the development of this region, which is known as a land rich in natural resources. Hundreds of years of spice plantations and mining history have become an inseparable part of the community's growth.

Throughout the island's development, the principle of sustainability has provided a lens and the power for the community as non-opportunistic stakeholders. Companies come and go, but the community continues to grow and become the backbone of the sustainability of the Bangka Belitung Islands. This mindset provides a perspective that economic development that exists within the region should go beyond sectoral interests. Taking the opportunity of a tourism boom driven by the novels and films set in the Bangka Belitung Islands, the tourism sector is seen as a strategic sector that can provide a role for the locals to take advantage of as business actors. Furthermore, the opportunity presented by nature-based tourism provides the role of conservation agents directly for the stakeholders that are connected in the value chain of tourism activities. It includes tourism business owners, SMEs, fishermen, regional leaders, small businesses, cooperatives, galleries, up to tour guides who struggle to thrive in their regions.

Collaborating with ANGIN as the advisor, the Provincial Government of Bangka Belitung, led by Mr. Erzaldi Rosman as the governor, initiated a massive change to increase the activation of local stakeholders within the tourism sector with a basis of conservation and the utilization of local biodiversity products. The change will start with this project, developing Bangka Belitung Islands' ecotourism by focusing on honey, pepper, and fish crackers as three unique biodiversity products. The ultimate goal is to improve the community's economy by advancing local entrepreneurs within the relevant sectors through the principle of collective impact carried out with the cooperation of investors, government, and local-global civilians.

Location Kaolin Lake, Belitung

This study was conducted as a starting point for the development in the Bangka Belitung province and its transformation towards sustainability. By publishing this report, we would like to invite organizations with the same mission to join in the development of small-medium enterprises (SMEs) and stakeholders involved focusing on the three exquisite biodiversity products, as mentioned in the area of Bangka Belitung.

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Scope of Study

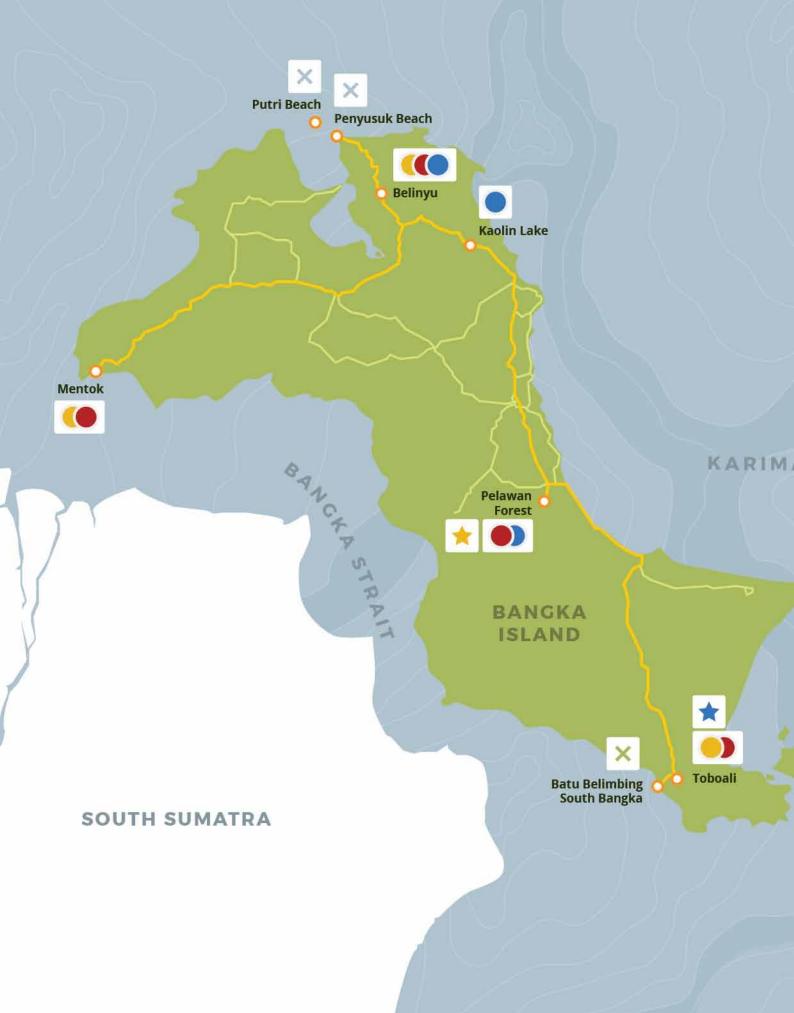




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About ANGIN

ANGIN is Indonesia's first and largest investment network committed to building Indonesia's entrepreneurial ecosystem. ANGIN acts as a bridge to connect and facilitate investors and entrepreneurs throughout the investment process.

By leveraging our expertise and the function of our network, we also provide on-demand consultation services for institutions, government, policymakers, international development institutions, and other players looking to develop Indonesia's entrepreneurial ecosystem. ANGIN's consulting service is implemented extensively through ANGIN Impact, as an advisory arm of ANGIN. Beyond research and consulting, ANGIN Impact works to bridge institutions to relevant stakeholders in the ecosystem. Engagements designed by ANGIN Impact facilitates multisectoral discussions that would not have occurred in a normal setting, pooling together fresh ideas, bringing forth new solutions through collaborations.

The collaboration between ANGIN and the Province of Bangka Belitung was born out of the encounter in the Indonesia Development Forum 2019. ANGIN, as an investor network supporting the growth of the entrepreneurial ecosystem through startups and smallmedium enterprises (SMEs), is in alignment with the province's agenda in developing the ecosystem.

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Background of Study

This project is a series of continuous efforts to develop the tourism potential in the Province of Bangka Belitung through its leading biodiversity products, based on a joint venture between the Province of Bangka Belitung and ANGIN. The development of these potentials is translated through a series of activities that include studies, training, and unlocking market access for leading SMEs and tourism with potentials for business players and tourism stakeholders in the Province of Bangka Belitung.

The study (or as stated as the assessment of Bangka Belitung's SMEs ecosystem) is necessary as a basic foundation for ANGIN and the province of the islands of Bangka Belitung to work together in marketing the provinces' local SMEs. The purpose is to develop these SMEs to grow sustainably in a local stage, regional, and international, possessing great competitive value and edge as a local enterprise or as agents of change with sustainable environmental scope. As such, this study is made with reference to the international standard of small and medium enterprises (SMEs), so it can also function as a reliable tool for further interventions to be carried out continuously.

Methodology and Study Limitations

In achieving the objectives of this research, the methodology is made of three stages — first, the mapping stage, where field surveys and data collecting were completed. Followed by, the analytical stage where collected data were processed in a different evaluation framework, and the synthesis stage to support the creation of recommendations.

The Charmaz exploratory approach was used with the hope to be followed with the McTaggart action research model to understand the evaluation. Data collection methods used were qualitative with non-random respondents mapped through stakeholder maps based on strategic management research, which distinguished respondents based on their professional role. These types of respondents were interviewed in the context of EESG, which were then analyzed in a value chain network and SWOT, then lastly synthesized through a market-driven approach.

Data collection methods used were qualitative with non-random respondents mapped through stakeholder maps based on strategic management research that distinguishes respondents into actors, players, crowds, and context setters.

| MAPPING STAGE | ANALYTICAL STAGE | SYNTHESIS & RECOMMENDATION STAGE |
|--|--|---|
| EESG Economic, Environment, Social, & Governance | Value Chain & SWOT | Market-driven Approach |
| EESG (Economy, Environment, Social and Governance) mapping methodol- ogy uses an approach based on the stated contexts. | The value chain analysis model iden- tifies industrial activities starting from inbound logistics, operations, outbound logistics, marketing, and services. Meanwhile, SWOT works as a strategic planning methodology to evaluate strengths, weaknesses, op- portunities, and threats in business speculation. | Recommendations are made to re- spond to apparent market needs, production of biodiversity products as part of tourism products correspond- ing to market trends and consumer needs. |

The limitation of this research includes specific points, including (1) Length time bias, whereby the research was done in November - December 2019 thus may not cover all the biodiversity products right on their harvesting period and limits the availability of respondents within that span of time. (2) Response bias, whereby the research was done in an explorative model, directly correlated with respondents' time availability. Limitations may also be due to (3) the possibilities of 'directed responses' as our team worked together with local facilitators who act as a bridge to understand differences.

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The Spread of Honey, Pepper and Fish Crackers in Tourism Destinations in the Island of Bangka Belitung

The mapping was completed in the Province of Bangka Belitung by interviewing players in the industry within the biodiversity products value chain based on the selected tourism spots. It started from the producers of raw materials (breeders, fishermen, farmers), producers or entrepreneurs, extension agents or middlemen, all the way up to marketers and distributors.

In this research, the mapping for the potentials of honey, pepper, and fish crackers as biodiversity products was done in selected locations visited during the survey. The products to be discussed are stated below:





FOREST HONEY

Wild honey is yielded from *Apis dorsata* bees. This species of bees are aggressive; thus, honey harvesting must be done with a special technique. This honey can be found mainly in the area of Namang or Muntok in Bangka.

Bee species Apis Dorsata

Nutrition

Protein, amino acid, antioxidant, flavonoid, alkaloid, Vitamin C and minerals.

KELULUT HONEY

Honey yielded from *Meliponini* bees or also known as stingless bee. This species of bees, like its name, do not sting hence they are easy for breeding.

Bee species *Meliponini*

Types of flowers Fruit trees

Nutrition

Antioxidant, amino acid, gluconic acid, enzyme, phytochemicals.

Types of flowers *Pelawan, Rempudung, Lenting, Gelam, Ules,* etc.

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WHITE PEPPER

White pepper is produced by harvesting ripe pepper, soaking it in water for 1 - 2 weeks, then drying it in an average span of 3 days.

Quality seeds Petaling 1 & 2

Harvest volume Variative based on the area

Harvest period July - August (panen raya) & December (panen neriang)

Nutrition Vitamin A & C, potassium, folic acid & fiber.

BLACK PEPPER

Black pepper is produced by harvesting unripe pepper and drying it under the sun in an average span of 1 week until it shrinks and changes color.

Quality seeds Petaling 1 & 2

Harvest period July - August (panen raya) & December (panen neriang) Harvest volume Variative based on the area

Nutrition Vitamin A & C, potassium, folic acid & fiber.





GETAS

Getas is a type of fish crackers mainly made out of mackerels and sago flour. *Getas* dough is first cut into small pieces, shaped into a form of a ball, and then fried.

Raw materials Mackerel, sago flour Nutrition Protein, calcium, phospor, iron.

KEMPLANG

A type of fish crackers with a basic ingredients of prawn, squid or fish mixed with tapioca flour and has a flat shape. *Kemplang* dough is often laid out to dry first before then roasted or fried.

Raw materials Mackerel, squid, prawns, sago flour **Nutrition** Protein, calcium, phospor, iron.

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Tourism Destinations and the Distribution of Biodiversity Products

As tourism spots, these destinations certainly have the potential to become the main distribution points for the three biodiversity products mentioned above. Besides interviewing industrial players in the value chain, tourism destinations were also visited to map out distribution lanes.

In this part, we will discuss briefly the tourism destinations available to provide an understanding of the kinds of developments that can be further pursued. Many of the tourism destinations have yet to be developed well to push economic circulation within the area.



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Penyusuk Beach, Bangka

Penyusuk Beach is a tourist site located in the district of Belinyu, Bangka. It is a small and beautiful beach with friendly locals. Facilities such as changing rooms and camping ground are in progress. The locals have also come up with an initiative to allow visitors to move across to Putri Island by using a speedboat.

Infrastructure Availability

Distribution of Biodiversity Products

- × Souvenir
- Facilities

Attraction

- Signage
- Signage Guidance
- HoneyPepper
- S Fish Crackers

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Putri Island, Bangka

An island located across Penyusuk Beach and can be reached by a speedboat. It is a small uninhabited island, and a local guide can help visitors navigate and explore the island within an hour.

| Infrastructure Availability | | |
|-----------------------------|------------|--|
| Ø | Attraction | |
| × | Souvenir | |
| × | Facilities | |
| × | Signage | |
| \checkmark | Guidance | |
| | | |

Distribution of Biodiversity Products

| × | Honey |
|---|--------|
| × | Pepper |

S Fish Crackers

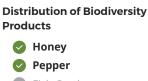


Muntok Heritage City, Bangka

Wisma Ranggam is located in the city of Muntok in the Regency of West Bangka. This building was used as a stopover location during the exile of Indonesia's first president, Soekarno, in 1949. During the visit, the area was closed for renovation.

Infrastructure Availability





Sish Crackers

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Pelawan Forest, Namang, Central Bangka

The Pelawan Forest, also a biodiversity park, is used as a tourism site in the conservation area. A variety of rare flora and fauna, including the *pelawan* trees and Tarsiuses, are part of the forest's wealth. The forest plays a role in providing many of Bangka's biodiversity products. Apart from this, tourists can also find an experienced tour guide to feed them with educative information as they explore the forest!

Infrastructure Availability



- Facilities
- Signage

Guidance

Distribution of Biodiversity Products





Kaolin Lake, Bangka

Kaolin Lake is an area once used as a kaolin mine, one of the primary resources on the island of Bangka Belitung. At this tourist site, visitors get to enjoy the magical vibe of the blue lake, take pictures as mementos, and spend time with loved ones with the available water attraction.

Infrastructure Availability



Distribution of Biodiversity Products



Fish Crackers

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Batu Belimbing, Bangka

In this location, visitors can enjoy a rare sight of the natural phenomenon of an ancient 65 - 200 million years old granite stones. It has a shape similar to a star fruit (*buah belimbing*) and is considered one of the most ancient types of granites in the world.

Infrastructure Availability

| \bigcirc | Attraction |
|-------------------|----------------|
| \bigotimes | Souvenir |
| $\mathbf{\times}$ | Facilities |
| \bigotimes | Signage |
| $\mathbf{\times}$ | Guidance |
| | ibution of Dio |

Distribution of Biodiversity Products

- × Honey
- 🗴 Pepper
- Fish Crackers

Jembatan Emas, Bangka

This bridge is 785 meters long and 23 meters wide. The bridge is located above the Pangkal Balam River in the area of Ketapang, Pangkal Pinang. It was built with an open-close system connecting the regency of Bangka to the City of Pangkalpinang. Due to its grandeur, many locals often come to enjoy the view, especially at sunset. As such, this site is well known as a local attraction site even though it is not a tourist site.

Infrastructure Availability

- Attraction
- Souvenir
- S Facilities
- Signage
- Suidance

Distribution of Biodiversity Products

- × Honey
- 🗴 Pepper
- Fish Crackers



Tanjung Kelayang Beach, Belitung

Tanjung Kelayang is an easily accessible beach with available facilities. As such, it is often used as the starting point for island hopping trips. Close to the beach, there are many small islands with ancient granite stones and beautiful corals nearby the snorkelling spots.

Infrastructure Availability



Distribution of Biodiversity Products





Tanjung Tinggi Beach, Belitung

Located next to Tanjung Kelayang, this beach is filled with gigantic granite stones. It was once a shooting location for a movie titled "Laskar Pelangi". The movie's release kickstarted the development of tourism in the Islands of Bangka Belitung.

Infrastructure Availability

- Attraction
 Souvenir
 Facilities
- SignageGuidance
- Distribution of Biodiversity Products

| | Fish Crackers |
|--------------|----------------------|
| \mathbf{X} | Pepper |
| \mathbf{X} | Honey |

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Lengkuas Island, Belitung

This island boasts a historical Dutch lighthouse built in 1882. The lighthouse stands 18 stories high and is considered one of the main attractions in this little island. There are many *warung* (food stalls) in its surroundings too!

Infrastructure Availability



Distribution of Biodiversity Products





Kepayang Island, Belitung

Kepayang Island is a small island consisting of only one but fantastic seafood restaurant. The beach is often visited by island-hopping tourists to have their lunch within the area of Tanjung Kelayang Beach.

Infrastructure Availability



Distribution of Biodiversity Products



- × Pepper
- Fish Crackers

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Bangka Belitung Honey

Value Chain Analysis and Travel Journal

In this section, the results of honey mapping will be presented based on field research conducted in various places in the Bangka Belitung Islands. To examine the value chain, the research team visited a protected forest, various honey entrepreneurs, local honey farmers, and souvenir shops suggested by local facilitators. In this section, value chain analysis is presented as the core of the report, then various specific information about honey is presented in a travel journal.



The sites listed in travel journals are sites visited by researchers to collect value chain data in a limited amount of time.



Dried beehives.

Location Namang, Central Bangka.

• A box of *kelulut* honey. Each of the pockets contain honey.

Location Buluh Tumbang Village, Belitung.

Honey variants in Bangka Belitung are classified based on the flowers; *pelawan* honey, *rempudung* honey, or multifloral honey. The signature honey from Bangka Belitung is the bitter *pelawan* honey sourced from the flowers of *pelawan* trees and endemic trees with a reddish bark, which only grows in Bangka Belitung. The trees are also within the scope of conservation.

The types of honey in this report are classified based on the species of bees, as identified in the honey value chain. It consists of two different value chains, namely wild forest honey from *Apis dorsata* (wild bees) and *kelulut/teran* Honey from *Meliponini* (stingless bee).

Based on the value chain activities in terms of inbound logistics, process, outbound logistics, marketing and service, the honey value chain can be noted as such:

Inbound logistics

Nursery, sourcing of raw materials, and all related preparations to yield products.

Process

Production, operational in processing raw materials to finished products.

Outbound logistics

Storage, which includes the process of product harvesting all the way to warehousing.

Marketing

Marketing, which includes all efforts related to advertising and sales.

Services

Distribution, activities, or post-purchase interactions with consumers.

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Forest Honey

Forest honey is a type of honey sourced in the wild by *Apis dorsata* bees. This species of bees are known to be aggressive so the collection of honey must be done with a special technique. This honey can be found primarily in the Namang area or Muntok in Bangka, but some producers are also available around Bangka and Belitung.

There are different types of wild forest honey, and some of the main ones include *rempudung* honey, multifloral honey (sourced from various flowers), and the bitter *pelawan* honey. The taste, color, and richness of each type of honey are also different based on the flower nectar collected by bees.



HONEY

 Flower of *pelawan* trees which contributes to the distinct bitter taste of *Pelawan* Honey.

Location Namang, Central Bangka

One of the many flowers as a source for multiflora honey.

Location Namang, Central Bangka

Bitter *pelawan* honey has a deep brown colour (left); while, *rempudung* honey has a lighter color (right).

Location Namang, Central Bangka





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Forest Honey In The Making



Nursery

Local residents 'make' *sunggau* (humanmade nest) in the form of two logs installed at a certain height to make it easier for bees to build their nest in the tree.

These human-made nests must be made by identifying the path of bees. Two wood must be cut using a specific machete.



Production

Local residents look for harvestable beehives in the forest.

Honey collector visits the location and start harvesting with smoke technique.

Collecting these wild honey requires honey collectors as Apis dorsata bees are aggressive and so **local residents** would pay them a percentage to help harvest it.

Storage

Local residents receive harvested honey and sell it to **honey entrepreneurs**.

Honey entrepreneurs store honey in a large container.

In some cases, honey collectors can also play a role of a honey seller.

Marketing

Honey entrepreneurs pack, label it with own branding and showcase the products for sale.

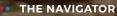
Marketing tools used are still traditional, although there have been some efforts in trying digital marketing technique.

Distribution

Local residents or tourists could purchase products in SME galleries or souvenir stores in the nearby area.

Consumers (including **tourists**) can do a repeat order by phone.

Honey entrepreneurs can repack honey based on consumers' requests, whether in a jerry can, plastic bottles, etc. However, packaging up to standard is rather limited as they are still produced out of the island. Also, the sales of honey is still retailed in a small amount.



Kelulut Honey

Kelulut honey is a type of honey produced by *Meliponini* bees or also known as the stingless bee. This species of bees can be cultivated as they are not aggressive, it does not sting. The harvesting of this honey can also be done with a simple syringe. These honey farmers are spread out all over the areas of Bangka and Belitung.

Kelulut honey can bee easily harvested with a syringe.

Location Buluh Tumbang Village, Belitung.



Storage

Beekeepers harvest honey collected in the honey bee box with a syringe.

The taste of each honey box is rather inconsistent and always changes. Some with a tinge of sourness and some are just sweet.



Marketing

Beekeepers pack honey with their label and showcase as products.

There are still many challenges in terms of marketing logistics such as packaging. In fact plastic bottles as packaging must be sourced from outside of the island.

Distribution

Local residents or **tourists** could purchase in the **SME Galleries** or **souvenir stores** nearby.

Honey is still sold by retail in a small amount to SME galleries or souvenir stores.

Kelulut Honey In The Making



Nursery

Locals sell honey 'seeds' in the form of tree trunk.

Beekeepers build a honey bee box on top of the tree trunk 'seed', directing bees to build their nest in it.

Beekeepers are still finding ways to sustainably cultivate these bees. The 'seeds' purchased and used were found in the forest.

Production

Beekeepers normally wait for 3 months for the first harvest.

There are also cases where bees fail to build their nests in the designated bee boxes.

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Pelawan Forest Namang, Central Bangka

This place is the conservatory area of *pelawan* trees, a forest full of red-colored *pelawan* trees in the Namang area located in the Central of Bangka Island. In this area, there is a variety of biodiversities which can only found on the island of Bangka Belitung.

Pelawan tree's texture and reddish color

Pelawan tree's texture and reddish color makes it distinctive and easy to tell apart from other trees. Its flowers produce nectar, which is collected by wild *Apis dorsata* bees as they produce the bitter *pelawan* honey.

This honey can only be harvested once or twice a year; as such, the price is almost twice compared to the average sweet forest honey

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Wild beehive in Pelawan Forest

Camouflaged up above in the dense forest of Pelawan Forest is a wild beehive found by our guide, Zainuddin.

We could see just how high the nest is located compared to an average adult. As such, harvesting this honey requires specific skills possessed by only three harvesting experts within this area.



Flower from the pelawan Tree

Flowers from the *pelawan* tree. Its nectar contributes to the bitter taste of the *pelawan* honey.

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Pelawan mushroom

Pelawan mushroom is one of the rare biodiversity products of Bangka Belitung, which grows mainly around the area of Pelawan Forest. This mushroom is reddish and is loaded with protein. The locals believe that it can only grow when the weather is thunderous. Due to its rarity, it is often retailed up to two million rupiahs per kilogram. No wonder it is often called as Indonesian truffle.



Tarsius or Mentilin

An endemic primate, *Tarsius bancanus*, often known as *Mentilin* among the locals, is also one of the inhabitants in this conserved forest. Not bigger than the size of a palm, it is incredibly agile, jumping from one tree to another. Currently, it is classified as an endangered species due to its rarity.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products





 Mr. Zainur further shared how he had to order all these packagings from Jakarta since the packaging companies on the island of Bangka cannot meet the standard. FIELD JOURNAL

Mr. Zainur's House Belilik Village, Central Bangka

Mr. Zainur is one of the honey entrepreneurs in Namang. He sells his products in his front yard, with a simple glass cabinet filled with a few bottles of honey as samples. During the visit, he showcased two kinds of honey for tasting and also the kinds of packaging he offers.

He once tried to export the honey to Singapore, but his products could not pass the strict requirements and regulations.

The two kinds of honey sold by Mr. Zainur are the bitter *pelawan* honey and the sweet *rempudung* honey. Buyers get to choose their preferred packaging; glass bottles, plastic bottles, jerrycan, or a jar. The jar packaging is often used if consumers would like to purchase honey with its honeycomb.

For its convenience, consumers who are often visitors (tourists) often purchase honey with the plastic bottle's packaging. These honey-filled plastic bottles are then placed inside a paper box with his label.



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Kundi Village Muntok, Central Bangka

To maximize the land's potential in the area of Kundi Village, a palm tree owner placed a honey bee box in his attempt to attract bees to build their nest in it. The bees extract nectar from palm tree flowers.

The honey box can be made with a simple craft of using pieces of wood arranged in the shape of frames. The white particles sticking on the wood are the bee nest coming into shape.

Mr. Ahmat Sarimin, the head of farmers group association in Kundi Village lifted one of the frames to show us the honeycomb.

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Mr. Selamet's House Desa Buluh Tumbang, Belitung

Mr. Selamet is a honey farmer living in the village of Buluh Tumbang, Belitung Island. In his large backyard, he built a *kelulut/teran* honey farm to be harvested and sold to the locals in the area.

He tried to sell his products outside of the island a couple times, but the agents he entrusted could not sell his products well. In the end, Mr. Selamet gave up sending his products out of the city altogether. There were also times when he placed his products in KUKM Sriwijaya Gallery but did not sell well since customers are not sure of the products' originality.

A honey farm located at Mr. Selamet's backyard. The honey bee box is placed on top of a 'seed' in the form of a tree trunk filled with *kelulut (Meliponini)* bees. This 'seed' can be purchased with the locals at a price of Rp. 100.000. Currently, Mr. Selamet owns 300 'seeds', each with its honey bee box, majority of which are ready for harvesting. He was once visited by a bee expert researching on sustainable cultivation of *Meliponini* bees but received no fruitful result for himself. Sustainable cultivation would mean that in the future, he does not have to rely on the availability of 'seeds' to purchase, but can develop on his own.



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Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products HONEY



66

Each box can yield from about **400ml** to **1 liter** of honey in an interval of **3 months** harvest. This nest of *kelulut* (*Meliponini*) bees. The box is filled with an assembly of pockets (propolis) as the bee nest, all of which contain honey if cut open. Each box can yield from about 400ml to 1 liter of honey in an interval of 3 months harvest.

These bees are not as aggressive as such, harvesting the honey only requires a simple syringe as a tool.



Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

Bangka Belitung Pepper

Value Chain Analysis and Travel Journal

In this section, the results of honey mapping will be presented based on field research conducted in various places in the Bangka Belitung Islands. To examine the value chain, the research team visited a protected forest, various honey entrepreneurs, local honey farmers, and souvenir shops suggested by local facilitators. In this section, value chain analysis is presented as the core of the report, then various specific information about honey is presented in a travel journal.



The sites listed in travel journals are sites visited by researchers to collect value chain data in a limited amount of time.

Unripe pepper from one of the pepper trees in the area of Pelawan Forest.

Location Pelawan Fo<mark>re</mark>st, Namang Pepper is one of the main biodiversity products in the Islands of Bangka Belitung among palm oil and rubber. Pepper farming is not too difficult as it can be easily planted in almost any tropical area. However, pepper in the Islands of Bangka Belitung has a distinctive flavor with a high level of piperine (the critical component which contributes to the aroma and the spiciness of peppers). Bangka Belitung pepper, namely the Muntok White Pepper, is recognized with a Geographical Indicator.

While there are a few types of seeds, the key to producing good crops lies in its maintenance. In this report, the value chain will be classified into black pepper and white pepper. Both types of peppers come from the same seed and trees. What differs is the stage of which they are harvested and the following process.

Based on the value chain activities in terms of inbound logistics, process, outbound logistics, marketing and service, the pepper value chain can be noted as such:

Inbound logistics

Nursery, sourcing of raw materials, and all related preparations to yield products.

Process

3

Production, operational in processing raw materials to finished products.

Outbound logistics

Storage, which includes the process of product harvesting all the way to warehousing.

Marketing

Marketing, which includes all efforts relating to advertising and sales.

Services

Distribution, activities, or post-purchase interactions with consumers.

orange to red in color.

One of the ready-to-harvest peppers. Ripe peppers ar

Location Pelawan Forest, Namang

> Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products



Nursery

Farmers clear land and plant seeds.

Farmers placed a tree log vertically (called Junjung in local language) from the wood of Berdaru Trees priced at Rp. 35,000/piece.

Farmers plant crops in the span of 18 months to 30 months until harvestable.

Crops harvested when pepper tree is at age 18 months is called 'buah penjelangan'. For a tree to grow well, ideally it should be trimmed off at age 12 months and harvestable after another 18 months, thus a total of 30 months average.

Farmers could obtain seeds from the farmers group association. They are also supported with all kinds of subsidies from the Ministry of Agriculture and Food in terms of seeds, fertilizers and pesticides.



Production

White Pepper

Farmers harvest peppers when they are ripe; orange to reddish in color.

Farmers soak pepper in the water for 1 - 2 weeks until its skin peels off on its own.

Farmers then dry peppercorn in an average of three days.

For the local citizens of Muntok, harvests in the A month of July is called "Panen Raya" and in December as "Panen Neriang"

Black Pepper

Farmers harvest peppers while its unripe; green in color.

Pepper is sun dried for a week until it shrinks and changes color.



Storage

Middlemen purchase harvested crops and sell it to **collectors**.

Collectors keep pepper in a gunny sack in a dry room away from direct sunlight.

Middlemen do not set a special price even though **farmers** put effort in ensuring the pepper they sold are well-cleaned without any foreign particles.

The profit margin for **middlemen** is usually around Rp. 1,000 to 2,000.

In some cases, there are **farmers** who directly partner with **collectors**, as such there is no extra **middlemen** fee.

Marketing

Collectors sort pepper based on specifications expected by the market. (B2B)

Collectors pack pepper with own label and sell by showcasing the products. (B2C)

Marketing tools used are still traditional, meanwhile there have been some efforts in using digital marketing technique. Selling price of white ground pepper is slightly higher than whole pepper.



Distribution

Local residents or tourists can purchase from SME galleries or souvenir stores nearby.

Pepper entrepreneurs repackage peppers based on their agenda or consumer needs using plastic bottles, glass bottles, etc. Howover, packaging available still lack product differentiation.









Pelawan Forest Namang, Central Bangka

Besides honey, there is also an extensive plantation in the Pelawan Forest area.The picture above shows Mr. Zainuddin, a local resident who is also a tour guide is posing in the middle of a pepper plantation.



The fruits of pepper plants are shaped like grapes; When unripe, it is green in color and turns reddish when ripe.

Harvesting white pepper is different from black pepper. White pepper is picked when it is ripe and then soaked in water for about one week so the skin can peel off and finally dried. Black pepper is picked when it is still half-ripe and then sun dried until the fruit shrinks and turns black.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

high.

FIELD JOURNAL

Bangka

Pangkal Pinang City

other crops such as durian, chili, palm oil, and rubber.

There is a discussion around the case of pepper price fall;

even the players in it do not have the right solutions to

solve the problem. Pepper entrepreneurs now keep the

pepper when prices are low and sell them when prices are

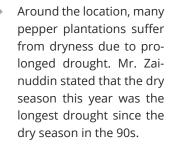
Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

The current low price of pepper is be-Mr. Andre is one of the pepper entrepreneurs in Bangka. Initially, he was interested in the pepper business because of the high prices, but now the price of pepper as a biodiversity product is falling, and Mr. Andre is replacing it with

cause pepper is relatively easy to grow anywhere (not only in Bangka), and some countries such as Vietnam have also started to produce pepper. In addition, storing pepper is quite easy and can last for decades.

Pepper can be stored in a robust sack under which is given aboard. This is one of the factors causing the stockpile of

pepper in the global market.















Kundi Village West Bangka

This is the house of Mr. Liong Khinfa, one of the pepper farmers in Kundi Village. There is a shop which sells farmer equipment on the left side of his house. Aside from pepper, this village is also rich with fish products and honey.

Mr. Liong Khinfa shared that if he told anyone he was a pepper farmer, he would be called a stupid farmer. This is due to the very low selling price for pepper that people in general only feel like they lose money and effort for nothing. Aside from pepper, he is also diversifying his plantations to chili pepper since it can be harvested sooner and with a better price.

Mr. Ahmat Sarimin

Mr. Ahmat Sarimin, the head of *Gapoktan* (farmers group association), said that farmers are not motivated to produce a certain quality or grade of pepper because middlemen keep buying at the same price regardless of the quality.











Plasma Cooperative Kacang Butor Village, Belitung

The chairman of the Plasma Cooperative, Mr. Suhardi, holding a bag of pepper (*sahang*), which came from the local farmers. 90% of villagers earn a living as farmers, generally palm oil, rubber, and pepper.

The Plasma Cooperative

This cooperative began with Malaysian-owned palm oil company and the villagers in the area. They started pioneering peppers since three years ago.

They actively participate in exhibitions in which they aim to build awareness of Bangka Belitung pepper and also for the opportunities to partner with investors and buyers looking to buy pepper in a large amount.

Aside from the plastic bottle as a container for the peppercorn, local residents are empowered to weave handcarry packaging for pepper. This style of packaging intends to show the local identity.

Cooperative that sells farming equipment Located not far from the main office of the Plasma Cooperative there is a small shop (still part of the management) that sells farming equipment.

Cooperative's warehouse

This warehouse is located behind the cooperative shop and is ready to be used if there is a large amount of demand for pepper. This warehouse has a capacity of 100 tons.

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PEPPER

Batu Penyu Village East Belitung

The distinctive symbol of the Batu Penyu Village, a turtle monument on a stone pile located near the village head's office.

There is a pepper grinding machine at BUMDES (villageowned business entity), Batu Penyu Village which processes peppercorn from the local farmers. The pepper milling production is not carried out everyday.

The end products are packaged and labeled "MB" as a brand of the *BUMDES* in Batu Penyu itself. This product is an example of a business unit conducted by the local *BUMDES*.

Women from the surrounding area also work at *BUM-DES* for fish crackers production. Besides pepper, the fish crackers is an example of a product initiated by this local *BUMDES*.







Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

BILLI

AEON Mall Exhibition Jakarta

Billiton Spice as one of the pepper brands of Bangka Belitung on display in the exhibition in AEON Mall, Jakarta. The pepper are all sourced from the Belitung region. Apart from the exhibition, Billiton Spice have started distributions to Java and is sold in big supermarkets such as Kemchick and Grand Lucky.



JURNAL PERJALANAN

Meeting with Billiton Spice founder

PEPPE

ada Rihaa)

Kualhaapii

BUILT IN GRINDER

The meeting between Ms. Vivi, owner of Billiton Spice and Novi, a consultant from ANGIN.

Mrs. Vivi revealed that the economic state in the island of Belitung is highly dependent on the number of tourists.

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Fish Crackers

Value Chain Analysis and Travel Journal

The most popular fish crackers in Bangka Belitung are getas and kemplang. The research team visited various businesses, fishermen, production factories, and souvenir shops to examine the value chain. In this section, the value chain analysis is presented as the core of the report, then various specific information about fish crackers is presented in the travel journal.



The sites listed in travel journals are sites visited by researchers to collect value chain data in a limited amount of time.



Kemplang which have been packed and sold in the local souvenir stores.

FISH CRACKERS

Location Toko AKWET, Belinyu, Central

Bangka.

• *Getas* in the middle of frying process in a large frying pan.

Location UKM Rizky Sahir, South Bangka.

There are several types of fish crackers from Bangka, but the most widely produced and most commonly purchased are *getas* and *kemplang*.

Getas is a mackerel-based snack mixed with sago flour and round in shape. Other than *getas*, *kemplang* can be made from squid, fish or shrimp and mixed with sago flour, but the difference is that the *kemplang* is flat and dried first, then roasted or fried.

There are production sites in almost every area of Bangka and Belitung, but the biggest producers are in the South of Bangka.

1

2

3

5

Inbound logistics

Sourcing of raw materials, and all related preparations to yield products.

Process

Production, operational in processing raw materials to finished products.

Outbound logistics

Storage, which includes the process of product harvesting all the way to warehousing.

Marketing

Marketing, which includes all efforts relating to advertising and sales.

Services

Distribution, activities, or post-purchase interactions with consumers.

Fish Crackers In The Making



Raw Material Processing

Producers buy fish (or other seafood) from the market or fishermen.

Producers process fish; skin and grind fish fillet until fine.

Producers must adapt their products to available resources. If fish is not in season, it can be replaced with other seafood such as shrimp or squid.



Production

• Getas

Producers mix fish fillet with sago flour and knead.

The dough is then formed into small balls manually and then fried.

The process from kneading to frying is still done manually.

Kemplang

Producers mix fish fillet, squid, or shrimp with sago flour and knead.

The dough is then molded into an elongated shape and steamed. After which, the dough is laido out to cool down, sliced thinly, and then lastly laid under the sun to dry.

Kemplang can be stored in its sun-dried form or fried and roasted before packing.

The making of kemplang is labour and time intensive.



Storage

Producers package the products in a laminated transparent plastic.

Producers can store the end-product until six months to one year.



Marketing

Producers package their products with their own brand label. (**B2C**)

For *kemplang*, **producers** can sell their raw products (in the sun-dried form) to other entrepreneurs who may then repackage and rebrand the product.

There are no specific marketing techniques or strategies for *producers*.



Distribution

Local residents or **tourists** can purchase from **SME galleries** or **souvenir stores** nearby.

Most of the distributions are still offline.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products





Kemplang HK Kampung Gedong, Bangka

Mr. Akhiong, *kemplang* entrepreneur from the village of Kampung Gedong, Bangka. His fish crackers business has been running from generation to generation. Mr. Akhiong himself has been running this business for 12 years. Aside from selling with his own labels, he also sells raw *kemplang* to other entrepreneurs.





3

The production room located at the back of Mr. Akhiong's house. Dough left out to cool down (left) and dough steamer (right).





Kemplang dough in its elongated form. It is allowed to cool down to room temperature before it is cut into thin pieces and sun-dried.



Kemplang in the sun-drying process. This is located in front of Mr. Akhiong's house.



Kemplang made and branded by Mr. Akhiong with his brand "HK". Depending on the fisherman's catch and the availability of raw materials, he has to adjust his output.

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"AKWET" Snack & Souvenir Store Belinyu, Bangka

A snack and souvenir store called "AKWET" employs women in the area to work in his production kitchen for fish crackers. The final products are then labelled and sold in his store.

The women employees skillfully molded the dough for *kerupuk keriting* (a type of fish crackers) to be fried. This little factory is located next to the store owned by Mr. Hendi.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products



 Located in front of the AKWET snack and souvenir store, you can find the in-house made kemplang laid out for drying. In his store, he does not only sell his own fish cracker products but also from the neighboring producers.

FIELD JOURNAL

Rizky Sahir SME Toboali, South Bangka

Madam Jumika (56) is the owner of Rizky Sahir SME with her second son Rizky Amanda (22) working as her secretary. Rizky Sahir SME is well known around the area for her high quality *getas* product. Rizky is meant to be her successor in the business which has been running for two generations.

Getas dough is shaped into small balls and then fried. The frying process takes a total of two hours. The frying lady must constantly move in a circular motion and mix *getas* until they expand and turn golden in color.





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UKM Juli'88 Toboali, South Bangka

Madam Juliani (left), 35 years old, successor for *kemplang* business passed down from her parents, Novi Juwita (middle) ANGIN consultant, and Madam Mila (right) industrial instructor.

Juli'88 snack gallery is located right in front of Madam Juliani's house. Before she started selling *kemplang*, she opened a doll shop but it was not lucrative. Meeting Madam Mila, she was advised to continue her parents' *kemplang* business as it was more profitable and so she changed her course of business.





 Roasting *kemplang* manually on top of a heated charcoal. This is a labor intensive process which requires constant attention as they can easily get burnt.



 The raw *kemplang* is in an alphabetical shape of '88. This is why the store was branded Juli'88.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products



UKM Durio Tanjung Pandan, Belitung

Madam Lita Elisa, owner of Durio snack and souvenir store in the Regency of Belitung. The store has been operating since year 2000 and sells 44 kinds of products, 90% of which are her in-house products.

An inspirational soul, apart from constantly coming up with own innovations, she also mentors and allows her mentee SMEs to sell their products in her store. The store has been operating since **year 2000** and sells 44 kinds of products, 90% of which are her in-house products.



Dry kitchen (left) and wet kitchen (right). This is the production kitchen of Durio snack and souvenir store, located behind the gallery. Pasted on the wall are clear and precise recipes and the store's standard operating procedures (SOP).

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KUKM Sriwijaya Galery Tanjung Pandan, Belitung

Interested to find out more on the kinds of SMEs in Belitung? Mr. Sulaiman, often goes by "Pak Lai" by his network, knows the ins and outs of the SMEs in detail!



Also acting as an incubator, KUKM Sriwijaya Gallery puts effort in empowering the local SMEs to come up with continuous product innovations leveraging the area's available resources.

Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

Study Evaluation

After the collection of data from the mapping and survey has been identified into the value chain, a comprehensive evaluation was done using SWOT model, which includes strength, weakness, opportunity, and threat in the process of commodification from the three leading biodiversity products. The evaluation was carried out to obtain a number of early conclusions in a more holistic process.



Evaluation of Bangka Belitung Honey

Honey

Strength

 LOCAL EMPOWERMENT THROUGH CONSERVA-TION

The production and consumption of honey develop a sustainable source of income through biodiversity & forest conservation.

- ALTERNATIVE SOURCE OF INCOME Hunting for honey has become an alternative source of income for local residents. Some of the local champions are trying to modernize the sales of honey.
- **IDENTITY & UNIQUENESS** Bitter *pelawan* honey, which only exists in Bangka Belitung, has its own distinctive property in terms of the production process or even taste.

Opportunity

- **LEVERAGING TRADITIONAL WISDOM** The production processes clearly possess unique and culture-rich traditional techniques that can serve as attractions, simultaneously educating the public on the concept of agrotourism.
- THE DEVELOPMENT OF CULTIVATION TECH-NOLOGY There have been some experts interested in con-

ducting research in the cultivation of honey distinctive to Bangka Belitung. This could be done to ensure production stability.

POTENTIAL FOR PREMIUM MARKET Due to the rarity and the excellent quality of the honey, a marketing strategy can be to target a premium audience.

Weakness

- **UNDEVELOPED CULTIVATION TECHNIQUE** Both forest honey and *kelulut* honey are still unable to be cultivated at this stage in Bangka Belitung. For forest honey, the production is greatly dependent on the season. For *kelulut* honey, the production is dependent on the availability of the 'seed'
- **INCONSISTENCIES IN TASTE** In harvesting *kelulut* honey, each box of honey produces a different taste to the other, which is why it is a challenge to standardize.
- LOGISTICS & SHIPPING Challenges due to the lack of marketing facilities (e.g., access to packaging) and the expensive delivery fee if shipped outside the island.

Threat

LACK OF MARKET ACCESS

Bangka Belitung honey is not yet well known in the market therefore requires further promotion to open access to the market.

POTENTIAL SCARCITY Scarcity may occur if the honey cultivation technique

is not developed enough.

DOUBTS IN BUYING

The lack of market education on the available types of Bangka Belitung honey and the rumor of fake honey being circulated are both contributing to this factor, creating doubts for consumers.

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Evaluation of Bangka Belitung Pepper

Pepper

Strength

- HIGH LEVEL OF PIPERINE ONLY FROM THE SOIL OF BANGKA BELITUNG The aroma and the level of spiciness for Bangka Belitung pepper are stronger compared to other pepper, with its piperine at level 7.
- CONVENIENT POST-HARVEST STORAGE Storage for post-harvest can be done easily and can last up to tens of years.
- HUNDREDS OF YEARS OF EXPERTISE Bangka Belitung is one of the largest producers for pepper since hundreds of years ago. This production expertise has been passed down from generation to generation.

Weakness

• LACK OF PUBLIC EDUCATION AND ACCESS TO MARKET

The market and public are not aware of the specialty of Bangka Belitung pepper as there are no promotions or campaigns. The market has significant potential but is untapped.

• LACK OF DIRECTION FROM THE GOVERNMENT IN TERMS OF PEPPER QUALITY Farmers are aware of the grading system for pep-

per, but no clear direction and motivation to produce pepper in high grades, as prices set by middlemen are the same regardless.

Opportunity

- WORLD-CLASS AGROTOURISM OPPORTUNITY Tourism sites, education, and the development of culinary tourism can also be done by advancing the icon of Bangka Belitung pepper.
- **DEVELOPMENT OF DERIVATIVE PRODUCTS** Pepper can be further processed into derivative products and repackaging through innovations to increase the selling price, especially in the culinary sector.

Threat

GLOBAL COMPETITION

There are other countries like Vietnam, with a considerable market share as a pepper supplier from Southeast Asia in the European and Russian markets.

• MANY PLAYERS IN THE INDUSTRY There are too many parties involved in this industry that reformation or industrial change can be difficult to apply.

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Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products





Evaluation of Bangka Belitung Fish Crackers

Fish Crackers

Strength

• 'THE FOOD OF THE PEOPLE' WHICH CAN NEVER RUN OUT OF CONSUMPTION

Kemplang is available in various qualities. A mixture of fish and flour with a ratio of 1:1 with the best ingredients for the export-quality and there are also domestic quality with lesser fish ratio. For locals, kemplang is everyday consumption as a complement for meals.

• **OPTIMISM OF SNACK MARKET** The snack market in Indonesia is extensive. There are potentials in the product development for the local fish crackers to become a national or even global snack.

Weakness

able suppliers.

 DIFFICULTIES IN BREAKING THROUGH THE IS-LAND'S FRONTIER

Difficulties in breaking through to the market outside the island. These difficulties occur due to logistic challenges and also buyers with a different snacking habit.

LACK OF PRODUCT DIFFERENTIATION The lack of unique selling point can be seen from the uniformity in taste and packaging among the avail

Opportunity

- **DEVELOPMENT OF MACHINERY TO SCALE-UP** The opportunity to develop machinery for fish crackers production as a solution for the Bangka Belitung SMEs in conducting massive production.
- PRODUCT DEVELOPMENT

Easily accessible raw materials can be re-explored to come up with the development of new products, still distinct to Bangka Belitung, but easier for consumption in the modern world.

 OPPORTUNITIES FOR WORLD-CLASS AGRO-TOURISM

Tourism sites, education, and the development of culinary tourism can be done by building the brand and storytelling of fish crackers.

Threat

- LOW BARRIER TO ENTRY
 New players can easily enter the industry with low
 capital and easily accessed raw materials.
- INCREASING POPULARITY FOR IMPORTED
 SNACKS

Imported snacks with their sleek packaging and interesting innovations have grown in popularity, especially among the youths for personal consumption or as gifts.

 THE SCARCITY OF FISH DUE TO CORAL DAMAGE Coral damage due to mining activities has posed direct harm to the water in the area that the population of fish has decreased. Fish crackers producers also rely greatly on the ocean yield, and this puts them at risk of having to halt production completely.

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Action Plan and Collaborations

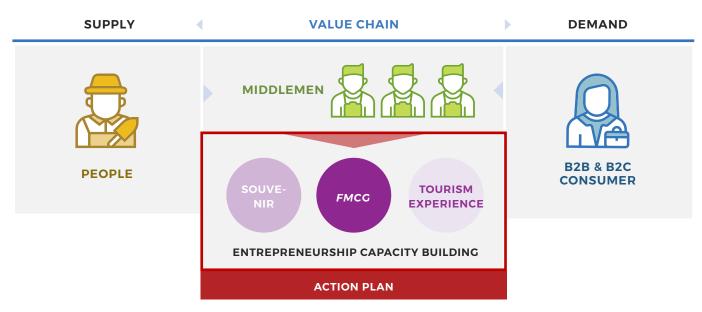
As the nurturer for the entrepreneurial ecosystem, ANGIN Impact invites all relevant entrepreneurial ecosystem players from various sectors (investor, bank, government, private, startup or other community organizations) to sustainably develop the biodiversity products of pepper, honey, and fish crackers in Bangka Belitung through a collective impact framework. In this framework, social innovations are done by various organizations with the same aim and measurement system to carry out empowering activities and with continuous communication. These activities are carried out within the supporting backbone organization.



Collective impact carried out by ANGIN through FGD by inviting the Governor of Bangka Belitung in the sustainable development of biodiversity products of pepper, honey, and fish crackers.

Present were Kehati, UNDP, TFCA Sumatera, Javara, Sekolah Seniman Pangan, Tree Hospitality Group, the Ministry of Tourism and Creative Economy, a farmer representative from Bangka Belitung, and the Governor of Bangka Belitung, Erzaldi Rosman.

Value Chain Market-Driven Intervention



The diagram above shows the methodology of designing an intervention program, where each player in the value chain process becomes an agent for collective impact. The activities to be carried out in the development of the biodiversity products of honey, pepper, and fish crackers in Bangka Belitung include four series of programs with two focuses, which are the development of biodiversity products and the development of entrepreneurship.

Intervention for biodiversity products is divided into three big programs, including biodiversity products as souvenirs, as part of the tourism experience, and as Fast Moving Consumer Goods (FMCG). Furthermore, entrepreneurship intervention as a part of the action plan will train the local residents in the value chain as part of the Sustainable Entrepreneurship Program. Four of the series of programs have been planned in a way to activate the potential for biodiversity products of

pepper, honey, and fish crackers in Bangka Belitung in its role to advance the tourism ecosystem in Bangka Belitung to sustainably increase the community's economic capacity.

Below are four series of program means as interventions to birth a collective impact within a multisectoral scheme:

| Biodiversity Products as Souvenirs | |
|---|--|
| Sustainable Branding and Pack- aging Program | Includes domestic and international language training and guiding, product branding, and packaging designs suitable for port-to-port souvenirs. |
| Tourist Travel Map Development Program | Designed to maximize tourist expenditure in Bangka Belitung to in- crease people's income. Includes the construction of tourist feedback/ exit survey and tourism packages development to determine priority areas. |
| Tourism Biodiversity Products Marketing | Includes the making of tourist information booklet and the develop- ment of online presence focusing on local biodiversity products as tourism assets. |

Biodiversity Products as Tourism Experience

| Ecotourism Destination Develop- | |
|------------------------------------|---|
| ment with Biodiversity Products | Technical training in bee cultivation, tourism guide, and tourism pack- |
| of Honey, Pepper and Fish Crack- | ages in locations such as Tanjung Pandan, Namang and Kampung Ge- |
| ers as basis (Agro-tourism, Herit- | dong with a theme of sustainable tourism. |
| age Tourism, etc.) | |

Biodiversity Products as Fast Moving Consumer Goods (FMCG)

| Honey, Pepper and Fish Cracker Product Innovation | Technical training to create derivative products and innovative culi- nary products distinctive to Bangka Belitung such as jeruk kunci, gan- gan, and other snacks with honey, pepper, and fish crackers as the main ingredients. |
|--|--|
| Biodiversity Products of Honey, | Includes training such as product certification and derivative prod- |
| Pepper and Fish Crackers Good | ucts, business mentoring, financial literacy, and hygiene standard & |
| Governance | quality control. |

Bangka Belitung Sustainable Entrepreneurship

Entrepreneurship Mentoring and Access to Capital

Tailored microfinance for aspiring entrepreneurs and micro enterprises to unlock more micro, small & medium enterprises by on-going result oriented business education.

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Conclusion

As entrepreneurs and investor network and advisors, the amount of enthusiasm we received from the SMEs and with all the support received in Bangka Belitung has brought us to write this book with so much hope. After the study, we concluded that the tourism and the utilization of biodiversity products could be the sector with the potential to accelerate the residents' economy, especially in the islands, where all sorts of access limitations can be a challenge for logistics.

This collective and cooperative spirit is a passion passed down from our ancestors. More than just a study, we hope that the publication of this report can serve as a kickstart for other organizations to participate in collaborations bringing innovative solutions. The Government of the Province of Bangka Belitung, together with ANGIN Impact, invite all relevant entrepreneurial ecosystem builders to join hands in the development of tourism in the Islands of Bangka Belitung. Be a part of this collective impact by reaching out to our contact person!

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Value Chain Mapping of Honey, Pepper, and Fish Crackers as Bangka Belitung Islands Ecotourism Biodiversity Products

THE NAVIGATOR

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