BEYOND PLASTIC MED ISLANDS

Capitalisation process

5th technical session

Engagement of private sector and alternatives to single-use plastic products

Coorganised by

SCP/RAC, Small Islands Organisation (SMILO)

18th November 2021

Regional Activity Centre for Sustainable Consumption and Production

SMILO SUSTAINABLE ISLANDS

Agenda

11h00 – 11h15 **Setting the scene: what makes a product a good alternative to single-use plastic products (SUPs)?**
Pedro Fernández, SCP/RAC

11h15 – 11h30 **Process to develop alternatives and promote them in local communities**
Quentin Bodiguel, SMILO

11h30 – 11h45 **Guide on honest solutions and promotion towards the private sector**
Leticia Serramalera, "Plastic Free Balearics" project

11h45 – 12h00 **Other responses to plastic pollution by "The Switchers"**
Stefanos Kamperis, Staramaki

12h00-12h30 **Q&A and exchange within the community**

BEYOND PLASTIC MED ISLANDS

Capitalisation process

Setting the scene:

What makes a product a good alternative to single-use plastic products (SUPs)?

Pedro Fernández, SCP/RAC

18th November 2021

Regional Activity Centre for Sustainable Consumption and Production

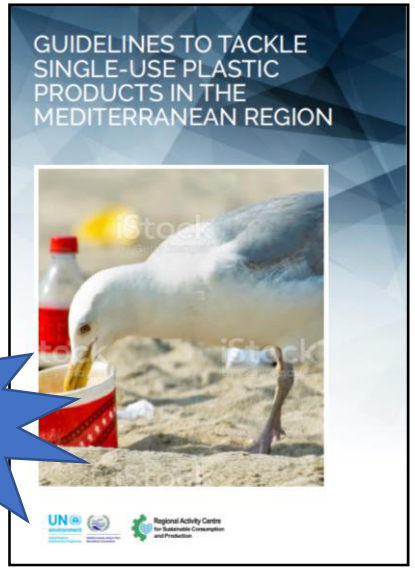
SMILO SUSTAINABLE ISLANDS

Alternatives to SUPs

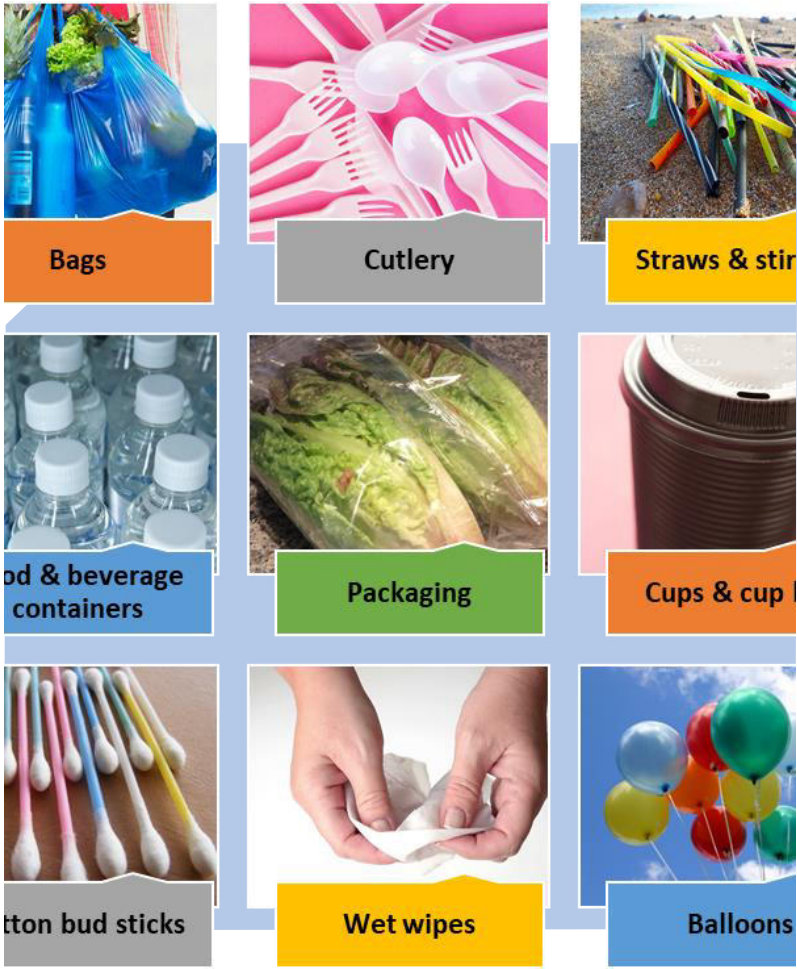
Necessity for the item in question? ➡ ∅

⬇

- Single-use non-plastic (SUNPs)
- Multi-use options (MUs)
- "Bio-plastics"?

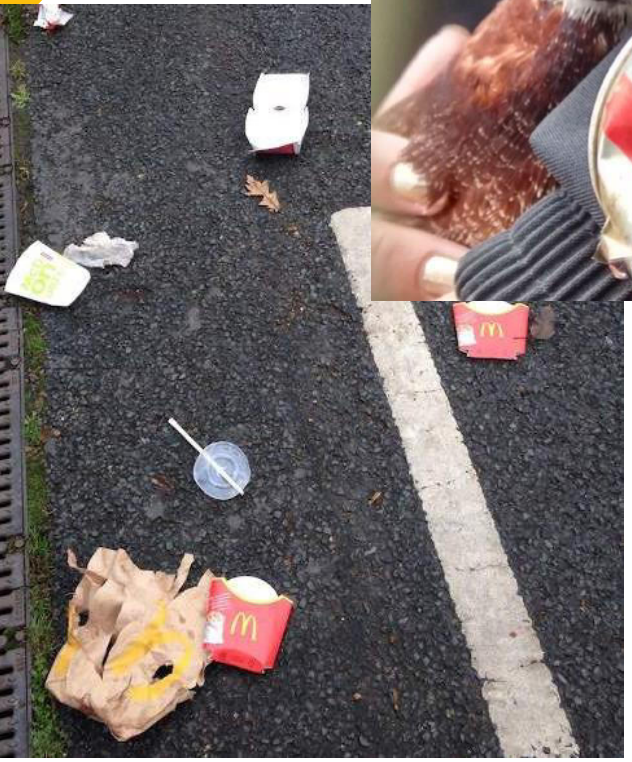


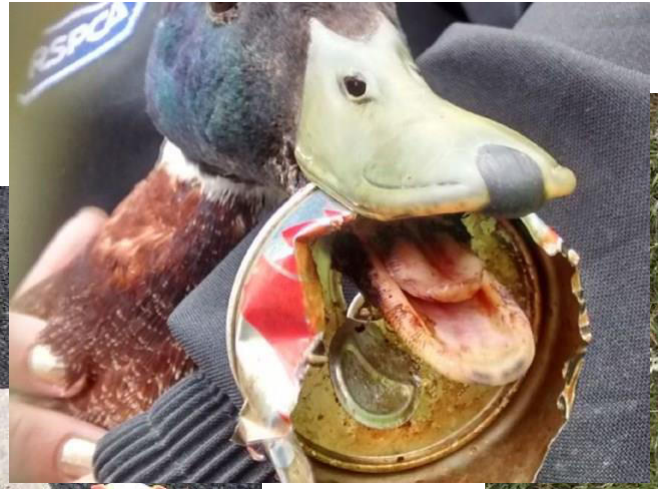
Upcoming



Single-use non-plastic alternatives (SUNPs)

- Not plastic, but still single use
- So, still get littered, but sometimes with less harmful impacts than plastic
- May be more recyclable than SUPs
- May have economic/ environmental benefits at outer points in the life cycle





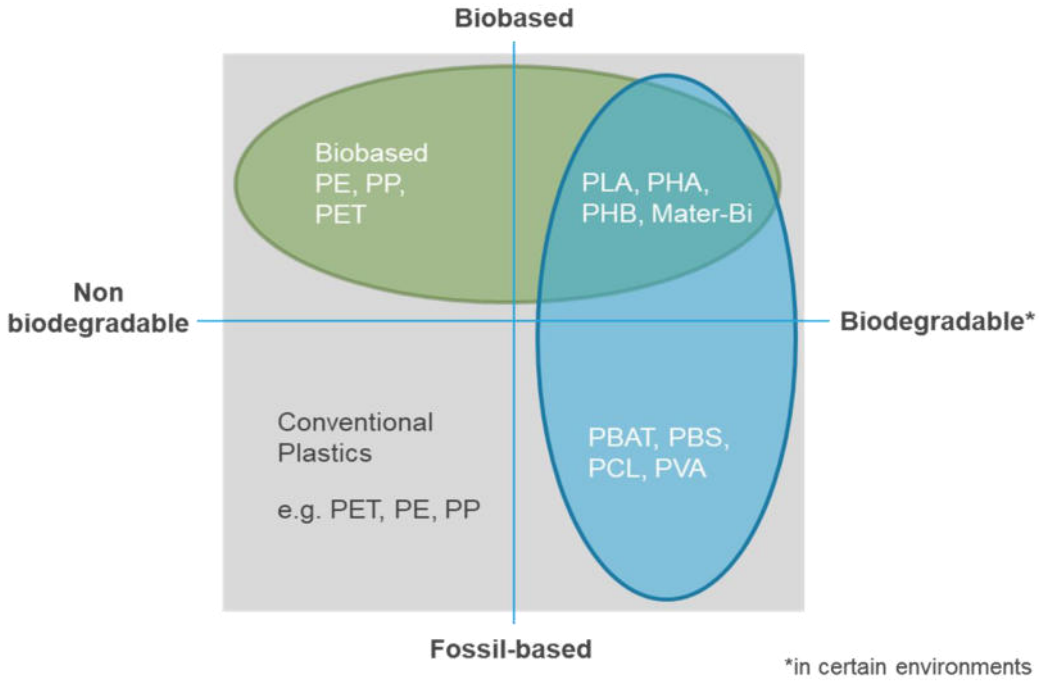
Multi-use alternatives (MUs)

- Can be plastic
- Higher quality and durability
  - Increased environmental and economic costs in manufacturing phase, however
- This performance improves the more they are reused
- They tend not to be littered


1 reusable bag
783 plastic bags
1 reusable bottle
83 plastic bottles
1 reusable cup
1256 plastic cups
1 reusable straw
295 plastic straws
COROCO
1 reusable cup
730 plastic cups


3,800
DISPOSABLES
=$1,000
1 YEAR
24
CLOTH DIAPERS
=$500
1-3 YEARS
No Pins required

Bio-plastics, a credible alternative?



*in certain environments

Bio-plastics, a credible alternative?

- Irrespective of the material, these items are **single-use** which implies impacts in terms of production and littering.
- **Infrastructure** to manage bio-waste is needed, including collection and end-of-life **treatment** (e.g. industrial composting).
- The legal framework should require these items to be in conformity with biodegradable **standards** (e.g. EN 13432)
- Citizens must be informed and aware to **separate** these items **at source**, and yet, differentiation by the appearance is difficult and labels can be ambiguous.
- In composting facilities, products' **size and format** can be a reason to be rejected as foreign material.

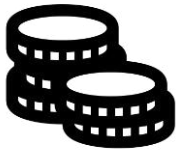
A carrier bag labelled as biodegradable after 3 years in the marine environment

How to assess alternatives?

- What are the objectives
  - Prevent/ reduce waste?
  - Prevent/ reduce litter?
  - Increase circularity?

- Are there environmental benefits?
  - Production
  - Use – e.g. transport/ washing?
  - Disposal – infrastructure?
  - Litter

- Are there economic benefits?
  - To producers
  - To consumers – no. of uses basis
  - To waste managers
  - To enforcers



- Are there any social benefits?
  - Employment?
  - Disability/ gender/ other?
  - Distribution impacts?

How to assess alternatives?

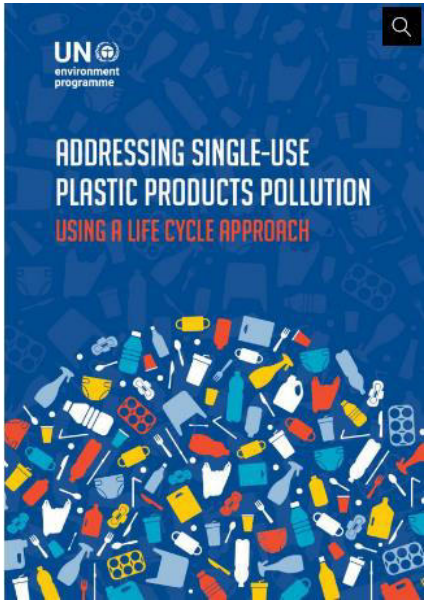
Life-cycle thinking is advised, considering national context

https://www.lifecycleinitiative.org/single-use-plastic-products-studies/

Single-use plastic bags and their alternatives: Recommendations from Life Cycle Assessments

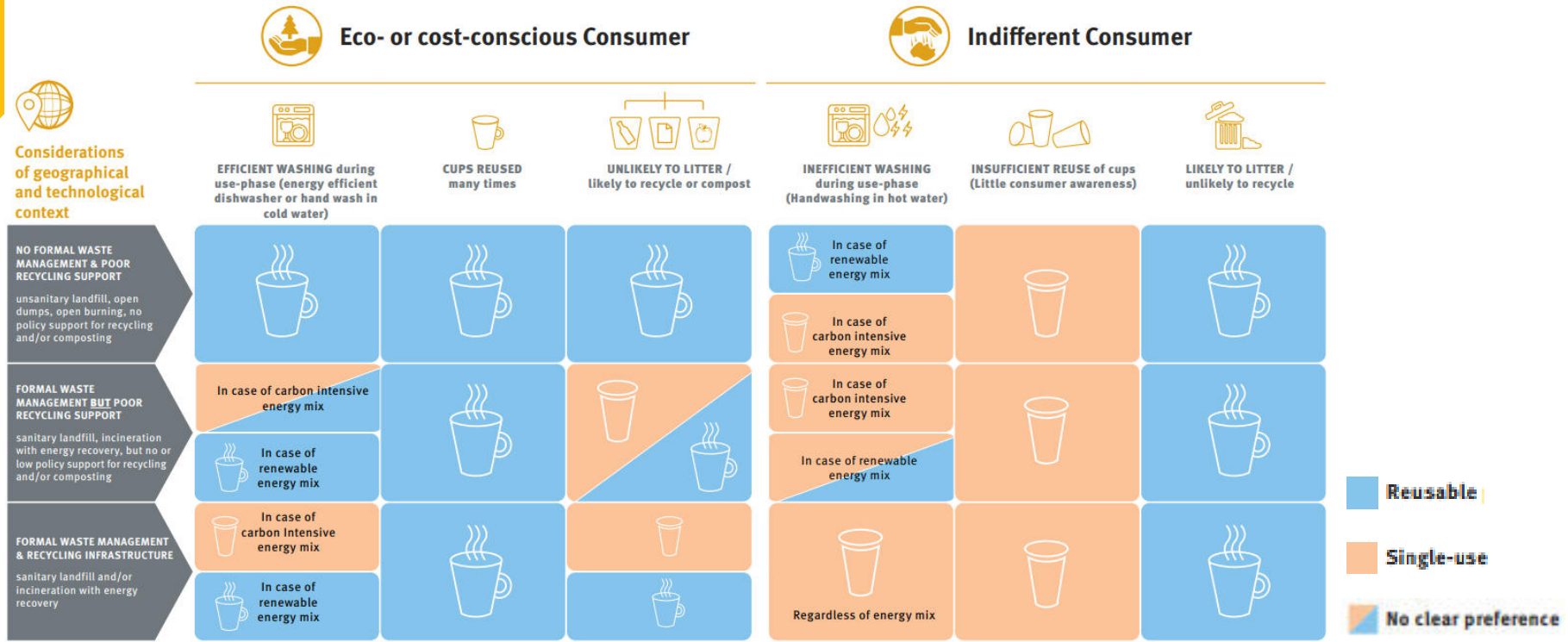
Single-use plastic bottles and their alternatives: Recommendations from Life Cycle Assessments

Single-use plastic take-away food packaging and its alternatives



Preferred type of beverage cups depending on waste management context and behavioural considerations.

This matrix helps countries, regions and cities to identify the closest scenario and most appropriate options for their context.
The content of the matrix is simplified. Please refer to the full narrative of the meta-study for details.



Specific examples in the Food&Beverage sector

http://www.cprac.org/es/archivo-de-noticias/genericas/the-business-case-for-tackling-plastic-packaging-is-now-available-down

7 MAIN APPROACHES

ZERO-PACKAGING OFFERS

IN-HOUSE WASTE MANAGEMENT

CORPORATE STRATEGIES

SFSC AND LOCAL FOOD SYSTEMS

ALTERNATIVE PACKAGING MATERIALS

REUSE BUSINESS MODELS

ECO-DESIGN

Increased employees' engagement and motivation

- ✓ Savings from single use cups reduction
- ✓ Suppliers reduced the use of secondary and tertiary plastic packaging
- ✓ Customer retention
- ✓ Improved user experience
- ✓ Purpose-driven work

REUSE BUSINESS MODELS

Which adjective(s) should we use for alternatives?

- Environmentally friendly?
- Ecological?
- Circular?
- Sound?
- Responsible?
- Honest?
- Local?

Information on collection and end-of-life is key!

BEYOND PLASTIC MED ISLANDS

THANK YOU

Beyondplasticmed.org

Regional Activity Centre for Sustainable Consumption and Production

SMILO SUSTAINABLE ISLANDS

BEYOND PLASTIC MED ISLANDS

Certification Plastic Free Balearics

"Honest Solutions Guide & Promotion towards the Private Sector "

Leticia Serramalera
Plastic Free Balearics Project Developer/Save the Med

18 November 2021 – 5th Technical Meeting-Engagement of Private Sector and Alternatives to Single-Use Plastic Products

BEYOND PLASTIC MED ISLANDS

Guide: Honest Alternatives to Plastic

How to Identify Fake Solutions

PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

Our Objectives

- Help the **hospitality industry´s** transition towards a more **zero waste & circular economy**
- **Reduce** and eventually **eliminate** the impact of single-use plastics in the Balearic Islands.
- **Position businesses as leaders** at the forefront of the
- protection and regeneration of our islands and seas.
- **Catalyse a discussion and synergies** between all the **relevant stakeholders** in order to work together for **declaring the Balearic islands as plastic-free islands.**

PLASTIC FREE BALEARICS


HORECA generates lots of waste but also can turn the tide of plastic contamination
the best waste is the one that has not been produced
PLASTIC FREE
BALEARICS

BEYOND PLASTIC MED ISLANDS

Why a guide

- An Urgent need to **Replace single-use plastic** products with **alternatives** that have **less impact on the environment.**
- Market has been flooded with **“fake” solutions** that are not actually better for the environment than the problem they replace
- **Confusion** for the consumers, the general public and hospitality industry which products to choose

BEYOND PLASTIC MED ISLANDS

Content

1. Honest Alternative vs Fake Alternatives
2. Methodology: Use of H.A.P.I (Honest Alternatives to Plastic Index)
3. List of 23 Categories of Products and their alternatives
4. Recommendations for Decision Making
5. Case Studies -Best Practices

Plastic free guardian

BEYOND PLASTIC MED ISLANDS

Businesses can...

- **Consult i**t before placing orders with suppliers.
- Follow the **Honest Alternatives guidelines** to replace single-use plastics.
- **Communicate** the transition to single-use plastic-free best practices to **suppliers & customers**.
- **Share** this guide with colleagues, suppliers, and other stakeholders in the HORECA value chain.

BEYOND PLASTIC MED ISLANDS

SAVE THE MED FOUNDATION

HONEST ALTERNATIVES

OUR GUIDELINES

1. Remove what is **unnecessary**
2. Replace with **processes**, not products
3. Replace with **reusable** products or reusable packaging systems
1. Replace with materials that can break down and be integrated **naturally** in the environment
1. Replace with materials that can be recycled **effectively**
2. Recycle the plastic what can't be removed or replaced

Always choose local and bulk options

PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

H.A.P.I.

(Honest Alternatives to Plastic Index)

SAVE THE MED FOUNDATION

CRITERIA

Waste Prevention

Compliance with the Laws

Reusability

Packaging Size & Format

Recyclability

PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

SAVE THE MED FOUNDATION

H.A.P.I.

Honest Alternatives to Plastic Index

FLAGS

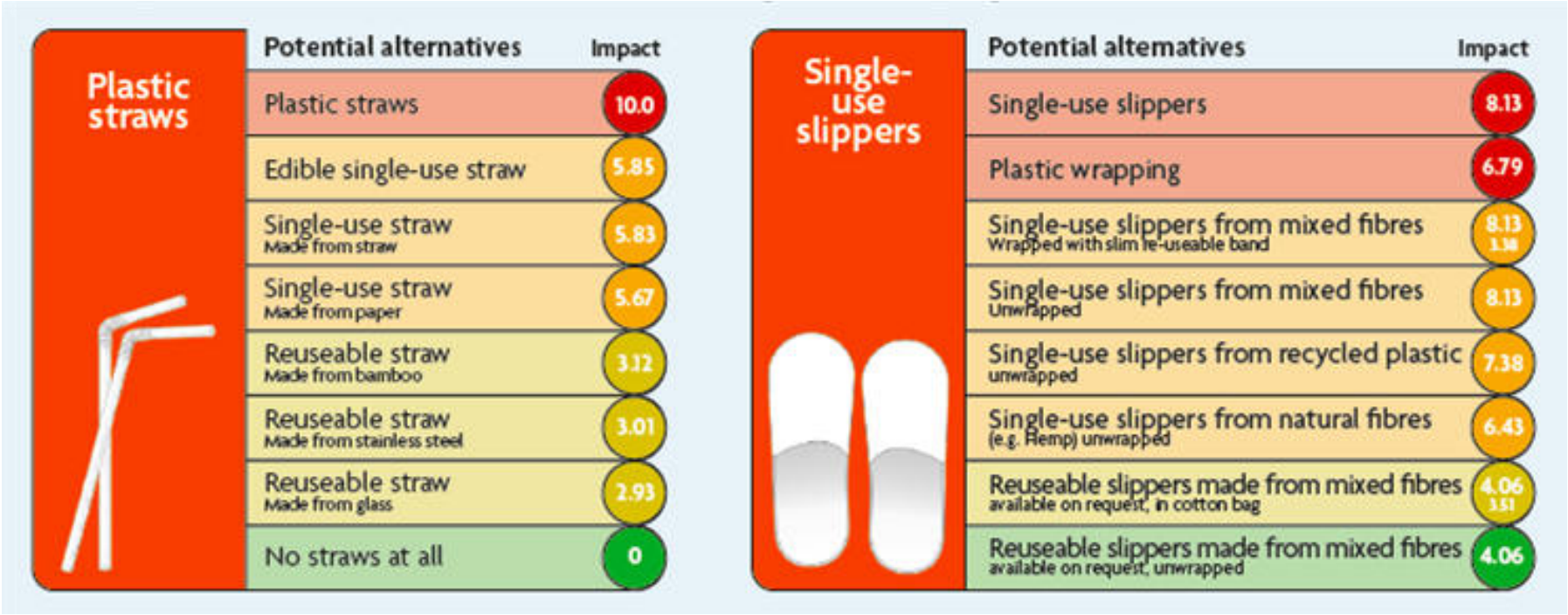
Products and packaging categorised according to flags:

Marine Litter

Local products

PLASTIC FREE BALEARICS

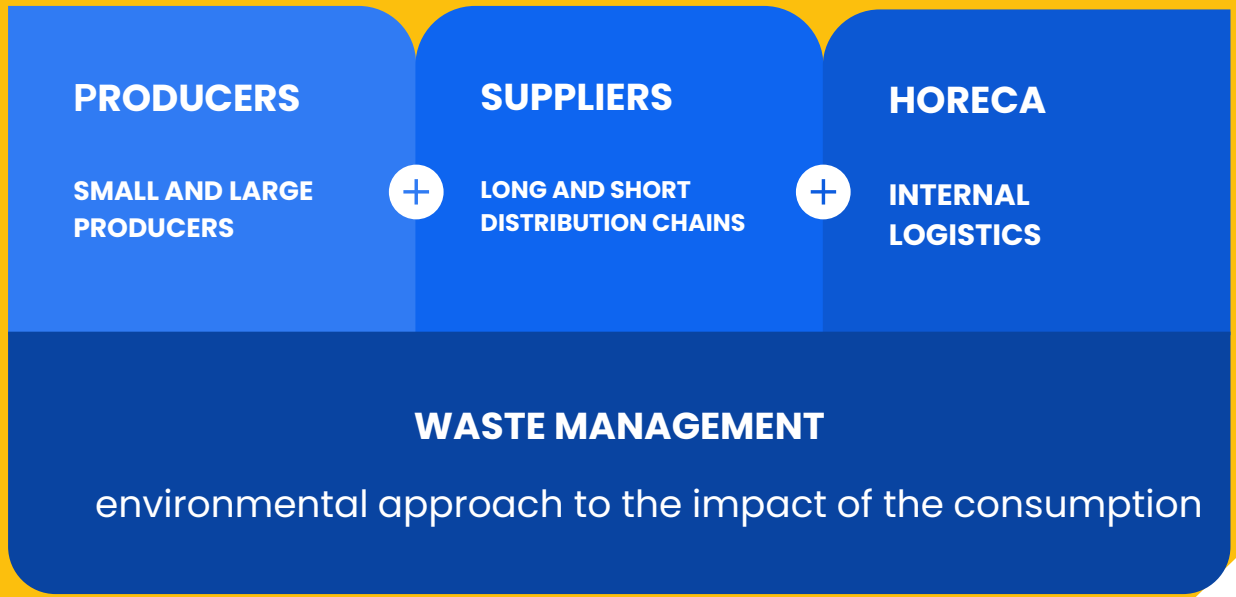
weight -compare - improve



#BreakFreeFrom Plastic

BEYOND PLASTIC MED ISLANDS

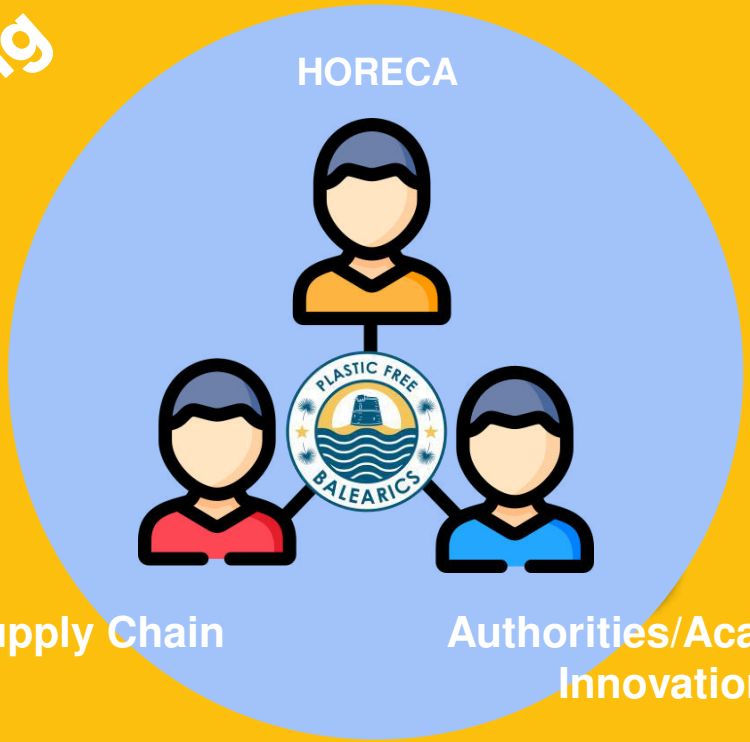
HORECA VALUE CHAIN



PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

Matchmaking



PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

SAVE THE MED FOUNDATION

IBIZA & FORMENTERA PRESERVATION

PLASTIC FREE FORMENTERA

www.plasticfreebalearics.org

Merci - Thank you
Gracias-Ευχαριστώ

PLASTIC FREE BALEARICS

BEYOND PLASTIC MED ISLANDS

Zero Plastic on the Hyères Islands, France, and replication in Kerkennah, Tunisia

Development and experimentation of local alternatives to SUPs

Quentin Bodiguel, *Project Officer in SMILO*
q.bodiguel@smilo-program.org

SMILO SUSTAINABLE ISLANDS

1. The diagnostic

- Identification of plastic items and businesses on the islands
- Inform the business-owners about the Project and a kick-off meeting
- Surveys & benchmarking (wishes, alternatives, suppliers, stocks…)
- Restitution of survey results

On the Hyères islands: lots of businesses were motivated and already used alternatives to SUPs, but not sustainable

On Kerkennah: ongoing process

- No exhaustive list of businesses → 80% sample

2. Research and development

- Find the raw material
  - **Hyères islands**: giant reed and the waste in music instrument industry
  - **Kerkennah**: date palm tree and food and fisheries industry (traps), and meeting with local authorities and prospection to identify and collect the waste ; Research phase on the raw material with labs and local University.

- Design the alternative items
  - **Hyères islands**: call for projects to find a designer; meeting with local businessmen and analysis of the survey result; different tries to produce relevant items
  - **Kerkennah**: in the future, with the assistance of the French designer (local design expertise)

3. From research to production

Giant reed-made alternative design

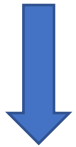
- Contact with Crafts and Artisans Chamber and other industries to test different ideas → "canne à couverts"
- Purchase of materials > subcontractor
  - Straws in low diameter rods
  - Ice-cream spoons in defective reeds

Large-scale production

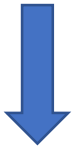
- New call for offers to find a producer
- Cooperation to code the most effective and productive programme

4. Making it a long-term solution

- Collect feedbacks from business-owners
  - General motivation: 11/12 interviewed business-owners want to keep proposing the products



Main challenge: to optimise the production cost in order to compete the imported alternatives



- Involve more producers to scale-up the production and generate a competition and lower the prices
  - Organisation of a meeting between the producers to find solutions (16/11)

BEYOND PLASTIC MED ISLANDS

THANKS!

For more details:

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staramaki

Social Cooperative Enterprise

DRINKING STRAWS
FROM NATURAL
WHEAT STEMS

KILKIS - GREECE

est.2019

Identifying societal challenges

PLASTIC POLLUTION

2 BILLION

*THE NUMBER OF PLASTIC STRAWS CONSUMED EVERY YEAR IN GREECE

ENVIRONMENTAL DEGRADATION

72%

*THE PERCENTAGE OF LAND CRITICALLY AFFECTED BY DESERTIFICATION IN KILKIS AREA

SOCIAL & ECONOMIC

21%

*THE UNEMPLOYMENT RATE IN GREECE (FAR HIGHER THAN THE EU AVERAGE)

STARAMAKI PROMISES TO BRING ENVIRONMENTALLY FRIENDLY HABITS TO OUR DAILY LIFE AND TO PROVE THAT ENTREPRENEURSHIP CAN ALIGN WITH INNOVATION AND SOLIDARITY

UNHCR
The UN Refugee Agency

AS STARAMAKI EXEMPLIFIES; CREATIVE, LOCAL AND SUSTAINABLE SOLUTIONS CAN BE FOUND FOR EVERYTHING IF WE WORK TOGETHER – EVEN FOR THE NOTORIOUS SINGLE USE STRAW.

UNFCCC

Identifying Social and Environmental Solutions

Staramaki utilises the by-product of local wheat cultivation to produce a natural straw from wheat stems

Staramaki is based in Kilkis, an agricultural rural region of north Greece. It creates employment opportunities and promotes social cohesion, as well as local and regional development

The circular economy business model of Staramaki goes even further as the straw is not only sold, but also traded with coffee residue
(Barter Bioeconomy system)

BARTER BIOECONOMY

καφσιμο
από υπολείμματα καφέ

A SYMBOLIC PERCENTAGE OF STRAWS ARE EXCHANGED WITH CAFÉ OWNERS FOR USED COFFEE GROUNDS. IN THIS WAY, TWO SOURCES OF ‘WASTE’ (ONE AGRICULTURAL AND ONE URBAN) ARE REPURPOSED BACK INTO THE ECONOMY AS USEFUL ‘INPUTS’ RATHER THAN DISCARDED AS THE END ‘OUTPUTS’ OF A LINEAR ECONOMY.

At the moment used coffee grounds are mixed with production waste (straw) in order to pilot a natural fertilizer
that will be used by staramaki’s farmers.

STRAWFEED

COFFEE GROUNDS CONTAIN MORE N AND K THAN COMMON ORGANIC MATERIALS SUCH AS COW MANURE AND CHICKEN MANURE (PANDEY ET AL., 2000; KASONGO ET AL., 2011).
THESE RESULTS SUGGEST THAT COFFEE GROUNDS HAVE THE POTENTIAL TO USE FOR ENERGY AND AGRICULTURE

MIX IS PRODUCED IN 3 X 5000-LITER CONTAINERS WITH AIR CIRCULATION (AEROBIC CONDITION). THE MATERIALS USED ARE SCG, AND WHEAT STRAW (TRITICALE).

STRAWFEED

FIELD EVALUATION OF SPENT COFFEE GROUNDS APPLICATION FOR CROP GROWTH ENHANCEMENT, WEED CONTROL, AND SOIL IMPROVEMENT.

		SCG		HORSE MANOURE	
		kg/m2	%	kg/m2	%
A1	400	16	4%		0
A2	400	12	3%		0
A3	400	8	2%		0
B1	400	16	4%	16	4%
B2	400	12	3%	12	3%
B3	400	8	2%	8	2%

STRAWFEED

THE EXPERIMENTS ARE TAKING PLACE AT THE EXPERIMENTAL FARM OF STARAMAKI SCE IN KILKIS, GREECE.

CONSUMER UNDERSTANDING OF WHAT A TRULY ECOLOGICAL PRODUCT MEANS, IN TERMS OF ITS ENVIRONMENTAL FOOTPRINT, IS STILL LIMITED AND OFTEN CONSUMERS ARE CONFUSED BY FALSE CLAIMS AND LABELS.

Featured in

PUBLICATIONS

STARAMAKI IS THE RIGHT CHOICE FOR A SUSTAINABLE ALTERNATIVE TO SINGLE USE PLASTIC STRAW

WWF

GREENPEACE

Competitive Advantage

PAPER STRAWS

20

*THE NUMBER OF MINUTES IT TAKES FOR PAPER STRAWS TO GO SOGGY IN COFFEE

Mature forests must be destroyed to harvest wood for the pulp needed to make paper, which then has to be heavily processed before becoming a paper straw

STARAMAKI

∞

*THE NUMBER OF MINUTES IT TAKES FOR STARAMAKI TO GO SOGGY

Staramaki, coming from an agricultural output, requires no energy and, as a plant, it seizes CO_2 during the stem elongation phase, plus, it requires no chemicals during manufacturing.

Competitive Advantage

BIOPLASTIC STRAWS

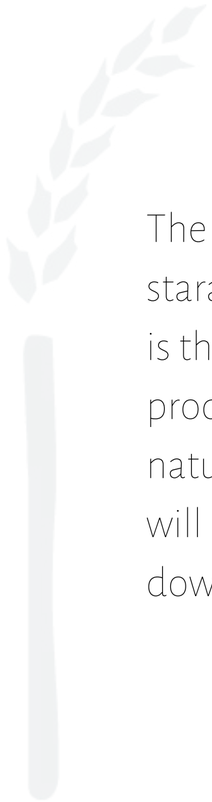
+247

*THE NUMBER OF GRAMS OF CO_2 EMITTED DURING EXTRUSION OF 1KG OF BIOPLASTIC STRAWS

The CO_2 footprint of bioplastic straws is high due to wastes during manufacturing. In addition, in many cases bioplastics don't break down any faster than regular plastic.

-11

*THE NUMBER OF GRAMS OF CO_2 ABSORBED PER WHEAT PLANT DURING ELONGATION



The unique point of staramaki is that earth is the machine producing it. It is 100% natural product that will naturally break down.

Competitive Advantage

IMPORTED STRAWS

40

*THE NUMBER OF EUROPEAN COMPANIES TRADING ASIAN WHEAT STRAWS

When assessing environmental impacts, tracing product origin is important, as impacts can vary greatly depending on production countries

Transport accounted for approx. 40- 70% of the carbon footprint of imported plant products transported by ship and/or truck.

1

*THE NUMBER OF COMPANIES PRODUCING WHEAT STRAWS IN GREECE

Staramaki aims to reduce the environmental footprint of EU trade by producing locally

From field to packaging, staramaki is one of the few EU based wheat straw manufacturers.

Featured in

HORIZON 2020 PROJECTS

Horizon 2020
European Union Funding
for Research & Innovation

STARAMAKI STRAW AS A BIO-BASED ANSWER TO DIVERSIFY RURAL REGIONS IN GREECE

BIOVOICES
CONNECTING BIO-BASED FORCES FOR A SUSTAINABLE WORLD

THE MOVE MAY EVEN HELP LIFT THE ECONOMY OF A REGION STRUCK BY THE FINANCIAL CRISIS

enabling

STARAMAKI ILLUSTRATES ANOTHER, INNOVATIVE WAY IN WHICH CEREAL STRAW CAN CONTRIBUTE TO THE BIOECONOMY.

AgroBioHeat

WHAT ATTRACTED ME THE MOST WAS THE COMMUNICATION WITH STARAMAKI AS WE WERE PRESENTED WITH AN INNOVATION OF HOLISTIC APPROACH, BRINGING US IN CONTACT WITH A PERSPECTIVE SO IMPORTANT AND NECESSARY NOWADAYS

PANACEA
Non Food Crops for a EU Bioeconomy

Publicity

IT HAS BEEN OBSERVED THAT PARTICULARLY SUCCESSFUL PROJECTS ARE BUILT ON GENERAL SUPPORT FROM SOCIETY

2.7

*THE NUMBER OF VIEWS OF OUR NON PAID PROMO VIDEO, IN MILLIONS.

36k

*THE NUMBER OF OUR FOLLOWERS ON SOCIAL MEDIA PLATFORMS

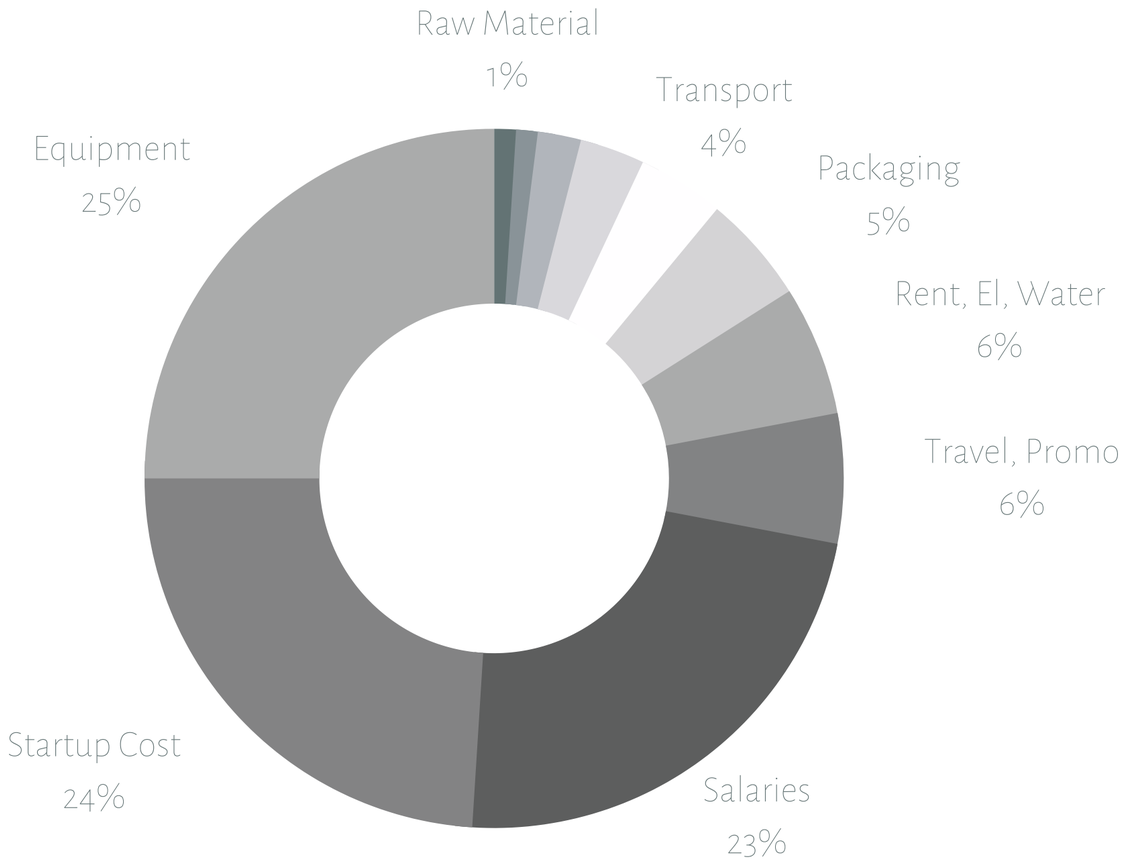
a **social enterprise** in the northern part of the country
is aiming to **revive** the local **agricultural** economy through **social innovation**

Support & Breakdown

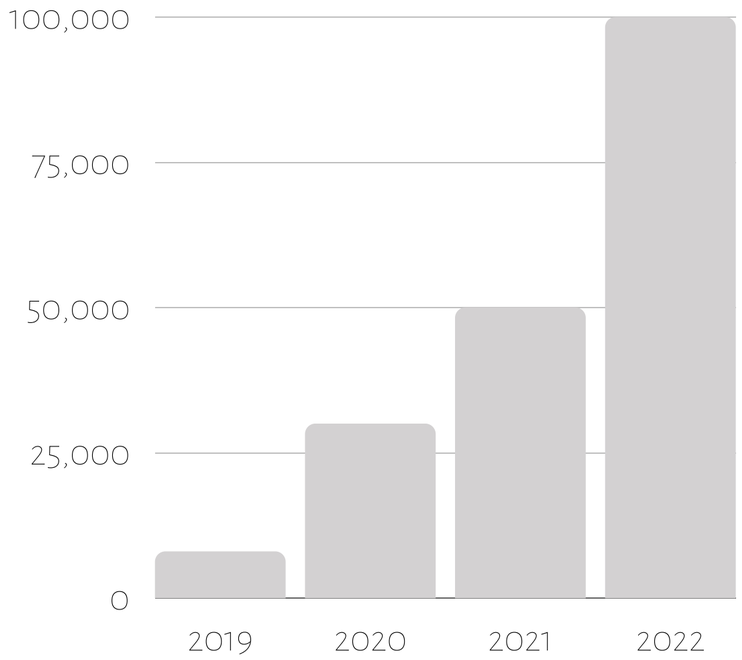
140k

*THE TOTAL AMOUNT IN EUROS RECEIVED TO DATE AS FINANCIAL SUPPORT

50K AS LOAN FROM BENEFICIAL RETURNS
70K AS GRANT FROM CHOOSE LOVE , GLOBAL WHOLE BEING FUND & HELP REFUGEES
20K AS WINNER OF THE VENTURE IMPACT AWARD

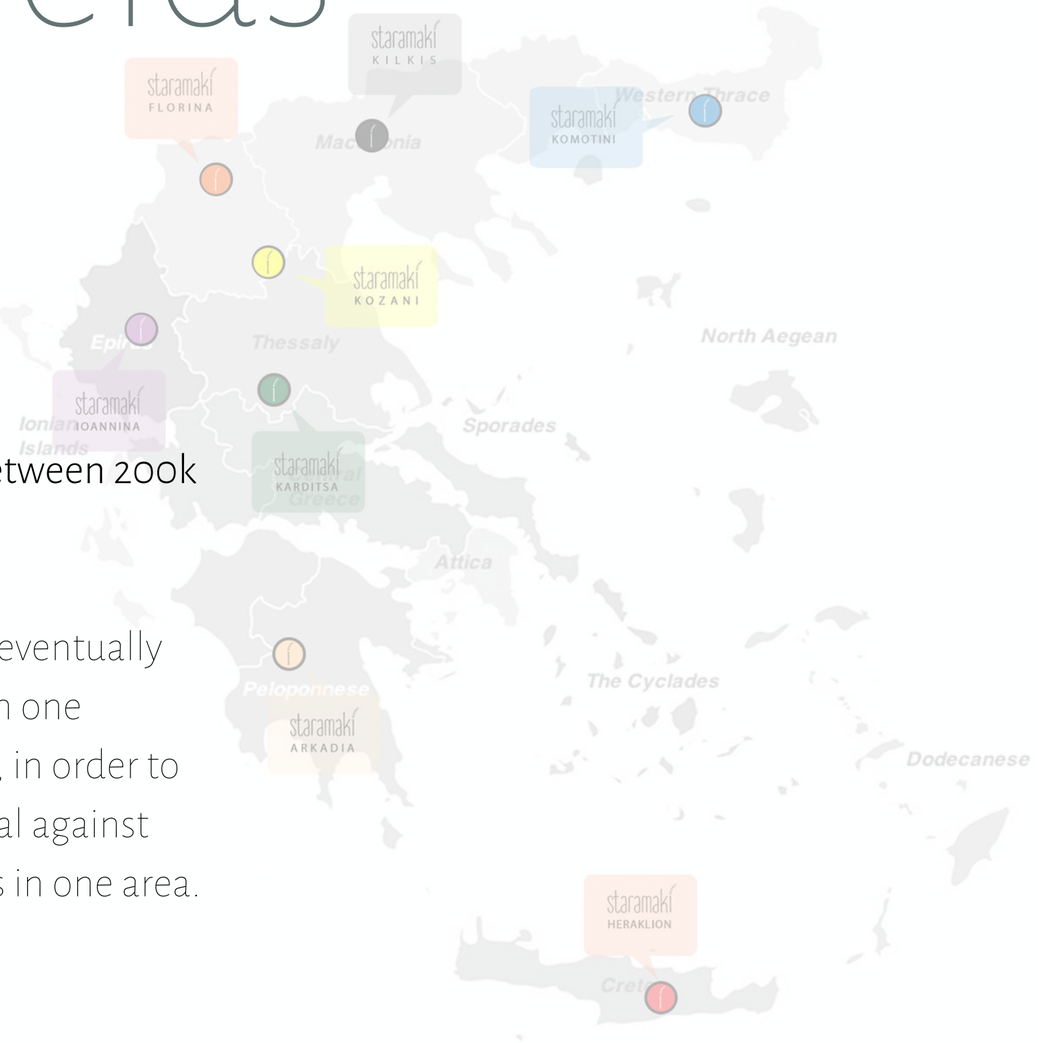


Area of Wheat Fields

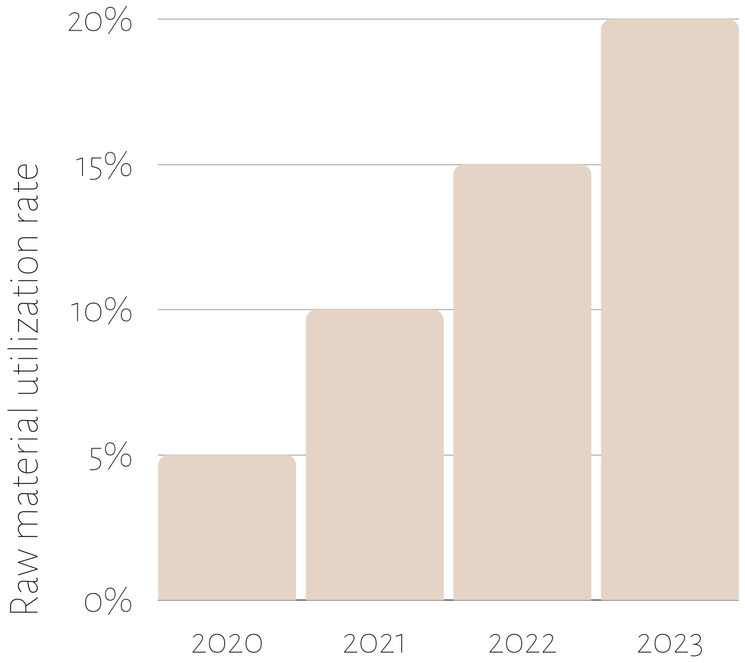


1000 m² of land provides between 200k to 400k wheat stems

Agricultural production will eventually be taking place in more than one points, strategically located, in order to secure supply of raw material against extreme weather conditions in one area.



Raw to Product Ratio



Not all stems can become straws. Each hollow stem has different length, diameter, number and positioning of solid nodes.

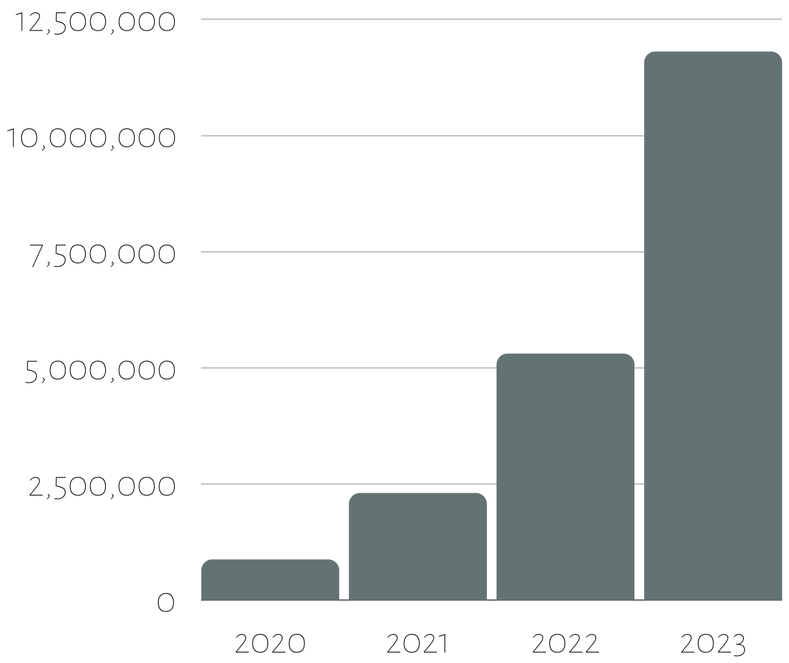
Agricultural practices that will improve plant characteristics associated with the production of a quality straw, such as plant height, stem strength, culm wall thickness, pith diameter, and stem diameter, are extensively studied.

Selected genotypes are evaluated for suitability and superior ones are tested in the production line.

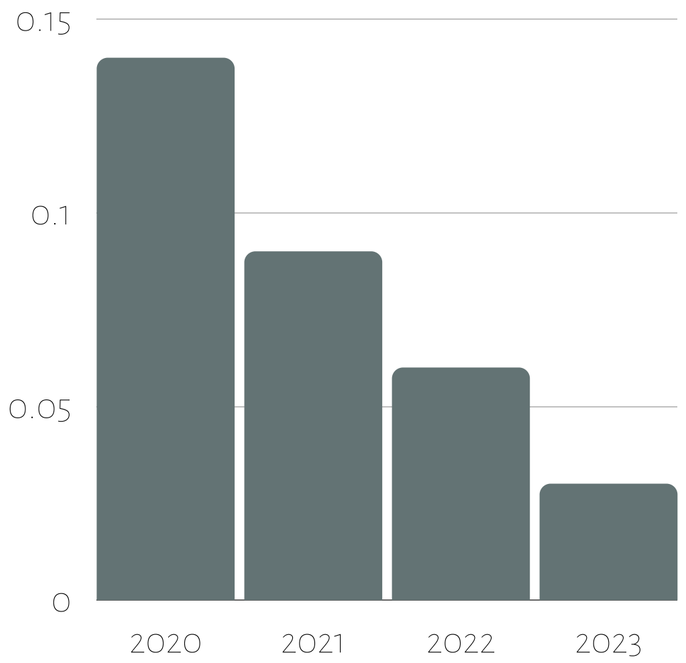
Improvement of wheat farming practices will increase the efficiency of the production process so that more material is utilised

Production Output & Cost

IN UNITS



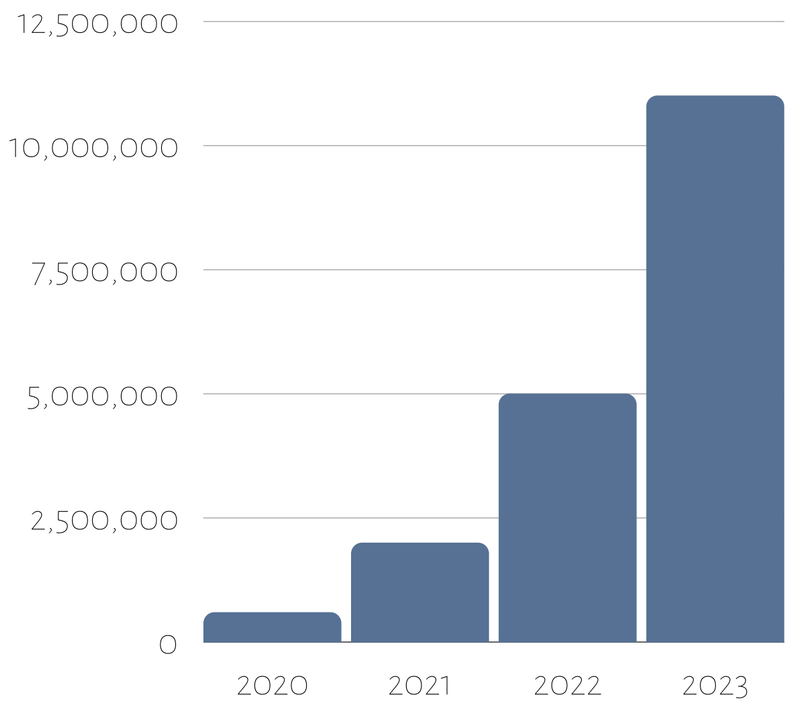
IN € PER UNIT



Gradually automating all production stages will increase annual output capacity, improve quality and reliability, utilize floor space, reduce waste and incidental costs

Sales

IN UNITS



Successfully communicating the social value of staramaki while efficiently reducing its cost through strong and lasting synergies with key companies will allow for a steady increase in sales volume.

A wider product range is to be introduced after the second half of 2022

500k

*THE NUMBER OF STRAWS SOLD TO DATE

120K TO NESTLE
100K TO VICHY
35K TO KAFSIMO
250K TO WHOLESALE & RETAIL

PROSPECTIVE CLIENTEL

VIVARTIA
SKLAVENITIS
IKEA
AEGEAN AIRWAYS
GREGORY'S
HOTELS
SCHOOLS
HOSPITALS

STARAMAKI REFLECTS THE PRINCIPALS THAT MEET NESCAFE'S OBJECTIVE TOWARDS SUSTAINABLE DEVELOPMENT: INNOVATION, POSITIVE SOCIAL IMPACT AS WELL AS AN ECO-FRIENDLY PRODUCT COMING UP TO NESTL'S HIGH QUALITY STANDARDS.

Nestlé

THE RECENT ECONOMIC DEPRESSION, THE GLOBAL PANDEMIC AND SOCIAL CRISIS HAS MADE THE NEED FOR INNOVATION TO ADDRESS SOCIAL CHALLENGES EVEN MORE APPARENT AND ACUTE. .

WE WANT TO DEMONSTRATE THAT THERE IS ROOM FOR INNOVATIVE THOUGHT IN PERIPHERAL GREECE, AND THAT BIOECONOMY CAN BECOME A FERTILE FIELD FOR SUCH INNOVATIVE ACTIONS.

staramaki

Social Cooperative Enterprise

*MORE THAN NUMBERS