



Sustainable Provisioning for Tilvera Expeditions



Concept

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[Piratas do Amor](#)

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1. Context: *from Anna Margaretha to Tilvera*

The couple Belén García Ovide and Heimir Harðarson recently acquired the beautiful sailing ship *Anna Margaretha*, a 22-meter polar expedition vessel. Under her new name *Tilvera*, the ship will continue its operations as a charter vessel in the waters between Norway, Iceland and Greenland.

Belén and Heimir express their mission as follows:

"To create and share our own lifestyle, to explore the beauty of our planet, to challenge ourselves and others, to live sustainably and in harmony with nature, to engage with likeminded people and friends while spreading the word about the importance of protecting our oceans worldwide."

2. Invitation: *a journey towards sustainability*

On the first trip of the 2023 summer season (Enkhuizen to Bodo / April 5th - 17th), Belén and Heimir have invited Raissa Teles and Christof Brockhoff to join as volunteers. As part of the invitation, Belén and Heimir expressed their desire to gradually optimize the ship's operations with regard to sustainability, both financially and ecologically. Raissa and Christof see this as a great invitation to put their passion and knowledge for sustainability into practice and assist Belén and Heimir on their mission. As a first step, we will focus our attention on sustainable provisioning.

3. Challenges: *processed foods and lots of waste*

Looking at the proposed menu and corresponding shopping list for the upcoming season (see Appendix 1), we can observe that it mostly includes canned, processed, non-organic, non-biodegradable products in small packages, leading to a lot of waste, little nutritional value and environmental pollution.

We understand that life at sea is challenging and practicality plays an important role, especially in the galley. We also understand that in order to make a ship financially sustainable, costs for provisioning have to be carefully calculated.



However, we are also convinced that with a little bit of effort and creativity, we can implement concrete, practical and easily replicable solutions that can improve the ship's ecological footprint, add to the wellbeing of crew and guests and share an inspiring message.

Together, we want to embark on a journey to find answers/solutions to the following questions:

- How can we reduce trash?
- How can we source organic food while staying within the ship's financial budget?
- How can we add more nutritional value to the ship's daily meals?
- How can we communicate Tilvera's commitment to sustainability to their guests and beyond?

The road to sustainability is long and it seems important to mention that in no way do we intend to be radical nor complete, but rather offer a starting point for discussion. Also, we won't be able to implement all of these ideas until departure, so let's choose wisely and keep improving along the way.

So, let's get started!

4. Opportunities: *bulk, storage, farms, soup, sprouts and soap*

As a first step, we suggest the following:

- Optimize shopping list to purchase in bulk;
- Optimize Tilvera's storage space for long term provisioning;
- Purchase fresh foods from organic farms or from food-waste-initiatives;
- Introduce sprouting as a daily source of fresh nutrients;
- Start the *Rescue-Soup-Project* to substitute instant soup and create a fun way to engage with local communities;
- Create a *Tilvera soap* as a personalized gift for the ship's guests.



4.1. Buying products in bulk

In order to reduce trash, we propose to buy as many products as possible in bulk. For this, we propose to have a two hour Zoom call to collaboratively:

- revise the existing menu and decide which products can be purchased in bulk;
- define quantities for each product: i.e. oats, rice, beans, nuts, dried fruits, etc.
- update the shopping list and find the best suppliers.

There are many wholesale suppliers in the Netherlands, offering both non-organic and organic products. As organic products are normally more expensive than non-organic ones, it seems important to find a "good balance" with regard to the ship's budget.

Potential suppliers are:

- [DeNotenShop](#) - Large variety of organic as well as non-organic products in bulk
- [Biologische Toko](#) - Large variety of organic products in bulk
- [DeMolenwinkel](#) - Organic grains in bulk
- [Molendezandhaas](#) - Organic grains in bulk
- [Big Green Smile](#) - Sustainable cleaning products

Below we did a first quick cost-comparison, which shows some promising results:

Costs per kilo	Jumbo Budget Version	DeNotenshop non-organic	DeNotenshop organic	De Molenwinkel organic	Biologische Toko
Oats	1.56	1.62	2.10	1.91	3.16
Rice Basmati	2.79	-	3.20	-	4.76
Mung Beans	-	-	3.4	-	5.16
Nut Mix	12.95	12.72	16.16	-	-
Granola	5.77	10.50	8.19	-	-
Studentenhaver	12.75	10.82	12.08	-	16.43



4.2. Optimize storage space

In order for bulk purchasing to make sense, Tilvera's storage space has to be adapted for long term provisioning. This can include designing a storage plan with seal tight containers such as the ones from [Sistema](#), introducing an inventory APP such as [Kitchenpal](#) and "sterilizing" all foods by freezing them for 24 hours prior to packaging.

4.3. Buy from local farmers and/or food waste initiatives

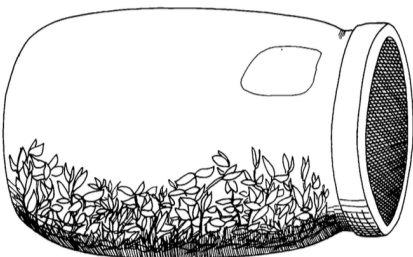
Buying fresh organic foods in March is a challenge. However, after some research we found a couple of viable options until now:

- [Gerritsland](#) - is one of the few organic farms that manages to conserve a big variety of vegetables and fruits over the winter time (no website).
- [Odin](#) - for purchasing pretty much everything else that you would find in a "normal" supermarket in organic & fair quality.

Other fresh food suppliers we highly recommend considering are the following:

- [Mondays FOOD CYCLE MARKET](#) - a market distributing food that is wasted by supermarkets and restaurants for free donation.
- [Instock Market](#) - the first B2B marketplace against food waste. They connect food surplus and imperfect produce with chefs and the hospitality industry.

4.4. Introduce sprouting: Tilvera's little garden



There is no other food you could possibly eat anywhere on this planet that is fresher, more alive and more nutritious than the sprouts of germinated beans, seeds, grains and nuts. With just a little effort, you can make mountains of fresh, crispy salad greens, vegetable juices, and many other jumping-alive foods right on a



boat in the middle of the sea - even if you are in the cold climate of Greenland or Iceland.

Sprouted seeds are such a complete food that if desired or necessary, they can become the entire diet of the seafarer. The various sprouts contain all of the main nutrients needed by humans.

→ [Chart comparing nutritional value of different sprouts](#)

How to get started?

Deciding which seeds: for best results, seeds for sprouting must be untreated and organically-grown. From our own experience and research, we recommend starting with **lentils, mung beans and alfalfa**. Thus, because they are very versatile, all-around seeds, that are very rich in minerals and vitamins and are among the easiest to grow. However, as you get more experienced with sprouting, you can include many more options such as pumpkin seeds, sunflower seeds, Garbanzo, etc. Here are a couple of great resources on how to sprout on a sailing ship.

→ Book ["Sailing the Farm"](#)

→ [Grim Grains](#) by [100 Rabbits](#)

Building the structure: We suggest using the "Flying Jars" method used by [100 Rabbits](#), which makes most sense for boats and that we can easily build ourselves using recycled jars and ropes.



Foto by [Grim Grains](#)



4.5. *Rescue-Soup-Project: building awareness and connecting with local communities*



Instant soup is cheap, very practical and therefore found on most boats, including Tilvera. However, its nutritional value is close to zero and, being sold in small packages, produces a lot of waste.

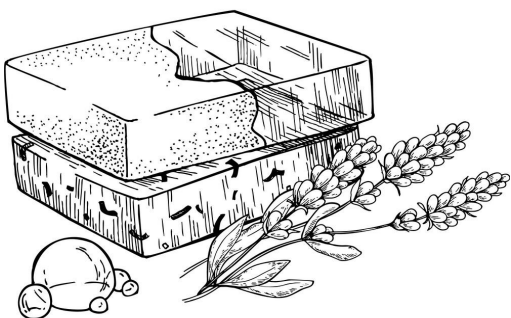
So, how about finding a solution that remains cheap and practical, but is healthier, generates less garbage and tells an authentic story!? This is how we came up with the idea of the *Rescue-Soup-Project*.

Following the idea of rescuing food wasted by supermarkets and restaurants, we propose:

- While in port, produce and freeze a big batch of soup using only food waste. For 14 people, eating soup every day, we would need approx. 80 liters for two weeks - easy, right!;
- To cooperate with food waste initiatives along the way and repeat the process whenever possible;
- To make use of this idea as a fun tool to engage with local communities and involve guests in an inspiring and educational way.

While we love the idea of "rescuing food", this of course is no necessity and the soup could also be made using fresh produce.

4.6. *Tilvera soap: a handmade gift*



Soap is a simple, yet strong symbol for care and cleaning. Two words that represent what we want for our Planet, our oceans and our bodies.

Since most guests usually don't bring their own biodegradable cosmetics, we thought of creating a handmade Tilvera



soap that we can gift to all guests for their stay aboard. We envision each soap to be wrapped in simple recycling paper with a poetic letter about Tilvera's mission for sustainability.

To produce the soap, there are basically three options:

1. We pay somebody to do it for us: very expensive
2. We participate in a soap-making workshop, buy the raw materials and do it ourselves: less expensive (approx. EUR 60 p.p.)
3. We do a simple online course - such as [DIY online soap making](#) for EUR 15 - get the raw materials and produce the soap ourselves directly on the ship: most fun!

From our research we found a variety of possible partners in Amsterdam:

- [De Amsterdamsche Zeepfabriek](#): a small soap and shampoo factory using only organic and sustainable resources.
- [DIY Soap](#): a zero waste store offering everything you need to produce sustainable soaps and shampoos yourself.
- [Zeep & Zus](#): organic soap making workshops.
- [You Wish](#): offering all ingredients for DIY soap making.

One important thing to consider: soap needs 4-6 weeks to cure before it can be used! So, if we want to make this happen, let's decide soon!

5. Documentation

We will continue updating this concept, will document it's implementation and turn the process into inspiring content which we can share on the blogs of Piratas do Amor & Tilvera Expeditions.



6. Appendix

6.1. Daily food schedule

08:00 Breakfast (normal, but NO fruits!)

11:00 Fruit bowl

13:00 Lunch with sandwiches + leftovers

16:00 Soup (instant soup)

Ca. 18:30: Dinner with salad or veggies + dessert.

6.2. Suggested recipes

- Meat-Stew (Gulasch) with Potatoes
- Veggie- Thai-curry with Rice
- Spaghetti bolognese
- Lasagne-Salmon/spinach
- Lentils-Indian Dal with Couscous
- Vegetable-Pie
- Oven potatoes + Veggies + tatziki + Hummus cream (with or without fish/meat by side)
- Filled courgette or Paprika with Rice
- Chili con carne
- Chickpeas with rice, tomato salad and pita bread

6.3. Breakfast

Bread, butter, 2 types of Jam, 2 types of lunch meat, 2 types of cheese (block), some slices of tomato/cucumber

Müsli or Porridge, Yogurt, sometimes dried fruit by side.

Juice, milk, coffee, tea.

6.4. Grocery list

Demand below last for ca. 1 week (14 People)

Grains, Flouwer, Nuts



20 kg. Bread - ingred. (flour + yeast)
4 kg. Oat
2 kg Reis
1 kg Lentil
2 kg Dry fruits
2 kg Nuts (for backing, salads, desserts, snacks...)
4 kg. Müsli
3 kg Spaghetti/ Pasta
2 Lasagne-plates
1 kg Couscous

Spices & Co

1-2 kg. Sugar
1-2 kg salt
10 x Pudding powder
5 L Kokosnuss milk
2 Jam
2 peanuts-cream
3 Honey
1 Mayonnaise
1 Ketchup
2 Glasses of Mustard
2 Liters Olive oil
3 Glasses Aceto balsâmico
1 x Pair of Cloves
3-4 pack. Coffee
1/2 Kakao
5 x Tea

Sauces

10 x Cans of Tomato sauce
3 x Tomato paste
5 glasses Pesto (red!)
2 glasses Green/ red Curry

Drinks

8 Liters Orange Juice
5 Liters Apple juice
Beer/Cola/Fanta/Sprite (for sell)

Vegetables

2 cans Cucumber
3 cans Olives
10 cans Mais
10 cans Beans



Artichoke / Asparagus

3 cans Beetroot

5 cans Red Cabbage

3 cans Bambus sprouts

2 cans Peas

2 cans Dried tomatoes

Maybe: Garlic/ Jalapeños/ Pepper

Fruits

3 x Peach cans

3 x Fig cans

3 x Ananas cans

3 x Fruit mix cans

Fish and meat

3 cans Sardine

7 cans Salmon

8 cans Sausages

4 x Hering in tomatoes sauce

Snacks

14 x Snacks/ Peanuts

14 x biscuits/cookies/digestive

2 Nugatti

21 Liter of instant soup

Dairy products

20 Liter Long-life milk

7 x Long-Life cheese blocks

4 x Feta cheese in Glas/Tetra-pack

5 x Tortilla-wraps

10 x cream (for cooking + dessert)

Cleaning projects

25 x Toilet paper

3 x Kitchen paper

1 x Sponge

1 pc. Napkins

Trash-bags (little+ big-Bags)