

HI Norway: Sustainable community garden made with recycled materials

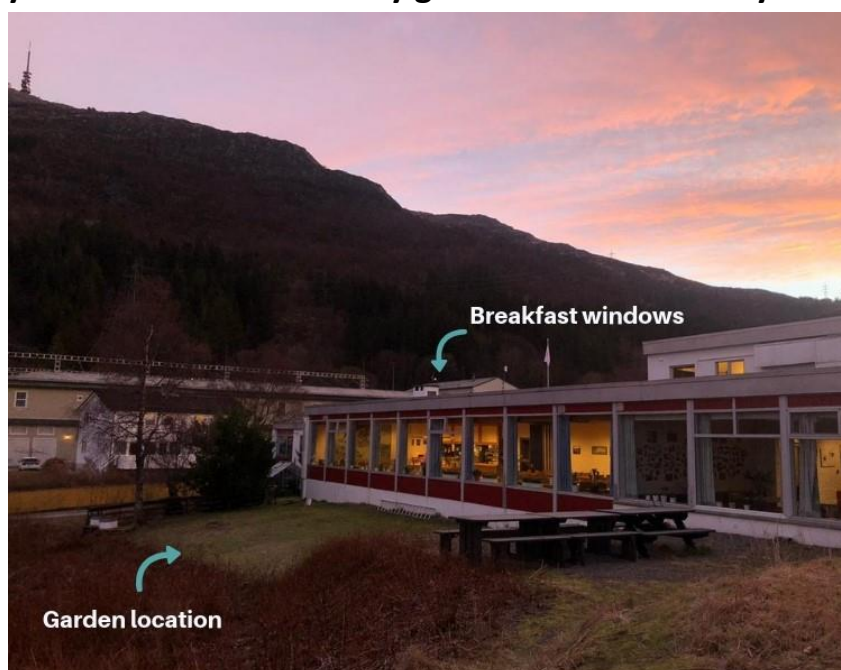


Figure 1: Hostel and garden location

Purpose/objectives of the project

Create a sustainable organic community garden with recycled materials at HI Bergen Montana hostel, where both staff, volunteers, neighbours and guests can pick up vegetables, fruits and herbs. The garden will be maintained mainly by the staff at Montana and the local community, but guests will also have the opportunity to help taking care of the garden, as we believe that nowadays travellers are looking for more meaningful experiences and connections while they travel.

We want to use recycled materials, such as tires, wooden boxes and pallets to construct the garden, which will be 100% free of pesticides and totally organic. Whatever is produced in the garden will be free for both staff, locals and the guests to take and eat, as well as used for breakfast at HI Montana. We also want to increase the beehives we already have in the hostel and start producing honey that the guests can use at the hostel (nowadays we are still buying honey from suppliers). We also envision to start selling small jars of honey to the guests, as a locally organic souvenir from their stay here in Norway.

In our last guest survey (October 2018), 91% of the guests said the breakfast at Montana was either “very good” or “good”. However, in the written suggestion section, we got many enquiries for fresh fruits. Thus, we believe that an organic garden, located right outside the breakfast area, will have the capacity of producing fresh fruits, herbs and vegetables that can be used at our breakfast and increase the overall satisfaction of the guests at the end of their trip. Moreover, our neighbourhood here in Bergen (Landås) is

[Click here to vote now](#)

a highly engaged and motivated community, involved in different projects such as local market exchanges and community building and restoration. Thus, we believe in the positive potential of creating a local garden in the area, and enhancing even more this civic sphere, as well as giving a new opportunity for the travellers to get together with the local community.

Inspiration for the garden with recycled materials:



Figure 2: Garden ideas from recycled materials from Google Images

Main objectives of the project activity:

- Produce organic and healthy food for the community and the guests;
- Strengthen the ties between Montana and the neighbors;
- Help guest to interact more with the local community;
- Give guests the chance to do something more meaningful during their travels;
- Educate guests on the importance of local gardens with organic production;
- Utilize recycled materials in the garden to raise awareness about consumption and sustainability.

[Click here to vote now](#)

The Sustainable Development Goals that the project addresses

3 - Good health and well-being: The production of organic food is healthier for the body because it doesn't contain chemicals and pesticides.

11 - Sustainable cities and communities: The garden will be located in a residential area in the city and will work in partnership with the local community.

12 - Responsible consumption and production: Planting vegetables and herbs in a garden outside the hostel will enhance local and organic production and reduce the consumption of products from big supermarket chains. Making the guests and the local community more aware about permaculture and organic consumption will perhaps influence them in their consumption choices in the future.

13 - Climate action: Reducing the consumption of products that are not locally produced will reduce the carbon footprint related to their production and transport. Avoiding synthetic fertilizers is also another way to fight carbon consumption.

15 - Life on land: Organic production does not affect biodiversity as much as traditional agriculture because organic does not use pesticides or chemicals which usually impacts wildlife in a negative way and causes loss of biodiversity.

17 - Partnerships for the goals: This community garden will have the capacity to involve the local community in the hostel activities, creating a partnership between hostel, guests and local community for sustainable development.

Methodology

The garden will be located right outside the main building, in front of the breakfast room windows.

Preparation: We will first prepare the area for the implementation of the garden, cleaning it and preparing the soil. The area chosen for the garden is located right outside the hostel, easily accessible and in front of the breakfast room - so all the guests have the opportunity to contemplate the garden while having breakfast. We want to start the garden right after high season (end of September), as in the summer months the hostel is working at full capacity. We already have 2 beehives in the hostel, but we want to increase this number to 5 beehives

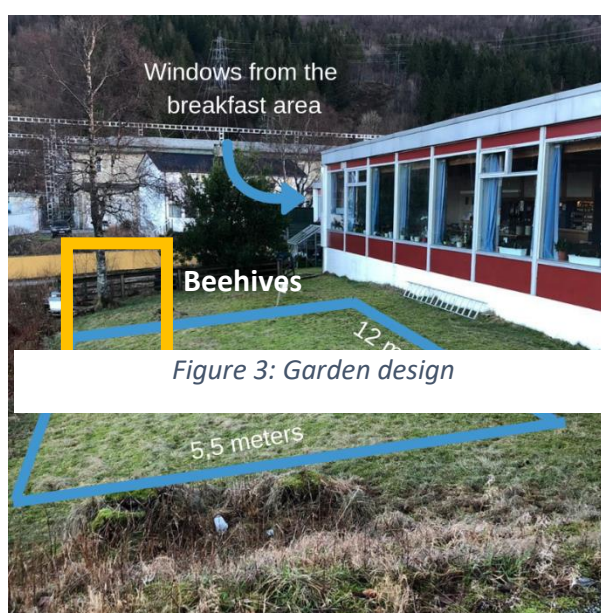


Figure 3: Garden design

[Click here to vote now](#)

Implementation: We want to set up 2 green houses on one side of the garden and use the rest of it to plant more resistant plants. Therefore, we our plan is to have:

Inside the greenhouse: herbs, leafy greens, tomatoes, strawberries, cucumbers, etc.

In the garden outside: vegetables like potatoes, kale, broccoli, pumpkins, etc.

As we also want to use recycled materials for constructing the garden, we will look for what can be used from the hostel (old beds, furniture, etc.) and look for other materials in websites as FINN (website where people advertise used items) or Brukthallen (area in the recycling station where people leave old items for pick up).

Tomas, our project manager, already have experience in constructing and taking care of the beehives, and this will be done together with the implementation of the garden.



Figure 4: Garden architectural plan

Maintenance: The garden will be maintained by the staff in the hostel and by people from the local community. We are positive that the guests will also like to take part in helping taking care of the garden as part of their experience in Bergen, and as a way to get in touch with the local community. As we also have students living in the hostel in the low season, we believe they would also join this activity. (See the *Monitoring Plan* above for schedules);

As soon as vegetables and fruits are ready, we will put up signs to inform guests:

Communication: We want to share our initiative with other hostels and guests, to raise awareness about local gardens and sustainability. Therefore, we will share the project and its development in our social medias and websites. (See *Communication Plan* above for info).

[Click here to vote now](#)



Figure 5: Signs to inform the guests about produce retrieved from Documentary “Tomorrow”

Monitoring plan

A team will be chosen to implement the garden right outside the hostel. Our idea is that guests, students and volunteers from HI Montana will also want to take part in helping to assemble and taking care of the plants while their stay, as well as using the produce. We want to invite the local community from Landås (our neighbourhood) to join us, and we thought it would be great to get in contact with elderly homes in the area and see if some of the occupants would like to join us taking care of the garden – a simple but powerful physical and mental activity. This way, we will be bringing the local community to the hostel and engaging them in the HI mission.

Activity	Summer/Winter	Spring/Autumn
Watering	Every day	
Cleaning up and weed control	Once a month	Once a week
Checking the greenhouse	Every day	
Picking up the produce	Whenever the plants are ready	
Fertilizing	-	Twice
Honey collection	Once a month (during Summer)	Once a month

[Click here to vote now](#)

Contribution of the project activity to the ten areas

Our Nature: Gardens filter impurities from rainwater and help storing higher quality water in the soil. Beehives has also positive ecological consequences. Bees play an important role in the pollination of many flowering plants, increasing the yield of certain crops such as sunflower and various fruits.

Our People: Staff and volunteers from HI Montana can take part in helping to maintain the garden, and can take the herbs, vegetables and fruits produced.

Our Communities: As we plan to create partnerships with projects in the local community, especially with the elderly, the garden can become a point of meeting and an activity shared by locals, guests and the staff of the hostel.

Our Friends: The guests will be able to take part in activities such as irrigation, planting, picking and fertilizing, helping us to take care of the garden.

Our Hostels: It has been proven that gardens in cities help reduce carbon footprint as they are great at storing carbon in the soil.

Protecting Destinations: The production of fruits and vegetables in an organic way will help attract more bees, insects and birds since it can serve as resource for them and affect positively the local fauna.

Consuming Sustainable: What is more sustainable than fresh, organic food, picked up from your own garden? :)

Mobility: The garden will be located right outside the hostel, so people with mobility challenges can come and perceive the garden in different ways (by smelling it, touching the flowers, etc.).

Financial Sustainability: A garden right outside the hostel is a great initiative for saving money for herbs, vegetables and fruits, and falls into the HI-Q/S certification already achieved by Bergen Montana.

Continuous Improvement: Bergen Montana Hostel already has achieved the HI-Q/S and the garden will be a way to continuously get better at the sustainability part of the certification.

Environment, social and economic impacts

Environment: The garden will be placed in an area right beside HI Montana, which doesn't have any trees or natural flora. Since it's an organic garden, there will be no impact related to the use of chemicals or pesticides. The garden might even have a positive impact to the local fauna, since fruits and vegetables might attract birds and insects to the area, as they serve as food for those species. Also, it has been shown that gardens have the ability to help the soil to store more carbon and phosphorus, as well as filtrate rain water. The beehives will also positively affect the environment.

Social: We envision that the garden will help the interaction among locals, the staff at Montana and the guests. We want to invite the neighbours and the guests to help the

[Click here to vote now](#)

staff to take care of the garden, in activities such as watering the plants, fertilizing the soil, picking weeds and picking up fruits and vegetables.

Economic: The garden will have a positive impact in the hostel economy. We are expecting to spend less in products that are served for breakfast such as tomatoes and cucumbers, herbs and fruits. Instead of buying from suppliers, fruits, vegetables and herbs will be picked from the garden. Hopefully it will also impact the number of stays in the hostel, as the garden can be viewed as a positive asset for many travellers that care about sustainability and also would prefer to eat fresh organic local food.

Estimation of emission reductions (CO² tonnes)

Precise calculations of CO₂ emission reductions are very hard to be done because they can variate according to soil type, climate, geographic location, landscape position, vegetation coverage and human activity (Ontl, T. A. & Schulte, L. A. 2012). A recent study from 2018 found that gardens and backyard lawns play an important role in carbon sequestration in cities, usually storing more carbon than even uncut forest areas (Ziter, C. & Turner M. G., 2018). Considering emissions related to transportation and shipment of the food to Norway from other countries plus the carbon sequestration created by the garden, we are expecting an offset of at least 50kg of CO₂ per square meter of garden per year.

Saved funds and return of investment (ROI)

We are foreseeing saving money on buying vegetables, herbs and fruits from supermarkets and suppliers, as we want to use what is locally grown in our garden. To make the calculations we did some research and found out that, according to the website GrowVeg, a family grew vegetables and recorded all the produce in one year, on their 1600 square foot (150 square metre) garden, came up with an amazing 834 lb (380kg) of total harvest. Still according to their calculations: "From this they computed three sets of prices, comparing what the produce would have cost if bought:

- A regular grocery store would have charged \$2196
- Their farmers' market would have charged \$2431
- An organic grocery store would have charged \$2548"

Thus, if we use their example to our hostel, our calculations would end up with:

Our total production space = 77.2 m²

Produce/savings per year (approximately):

- A regular grocery store would have charged \$1130.20 (£885.47)
- Their farmers' market would have charged \$1221.15 (£956.73)
- An organic grocery store would have charged \$1311.37 (£1027.41)

[Click here to vote now](#)

The data used by the website is from 2009, so if we assume the 17.04% inflation rate from 2009-2018 in the US, we end up with savings up to **\$1534.00 (£1201) per year only with the produce**, when compared to buying our produce from an organic grocery store.

We will also produce honey, so the financial savings will be even higher.

With the money we are not spending on the garden project, we will invest in upgrading our recycling system and have in the future a platform for composting at HI Montana. Two weeks ago, we visited a recycling station in the city to understand how the hostel can improve in this aspect and what can be done towards a greener hostel. We are still waiting the new budget from this new recycling company.

Why the project should be funded ahead of others

Bergen Montana hostel has always been engaged with sustainability. In order to offer the guests a better and more authentic travel experience, the hostel created a social volunteer project, where volunteers from all over the world have the chance to come to Bergen from 4-6 weeks, experience the Norwegian culture and engage with the guests. Their activities involve mainly taking guests for free hikes in the mountains, museums and to the city centre, and be responsible for a daily free coffee and cookies in the hostel's living room, where people have the chance to meet other travellers and share stories and experiences. Apart from the social aspect of sustainability, HI Montana also is a HI-Q/S certified hostel, meaning that it follows the HI criteria for environmental and financial sustainability. Moreover, the hostel is hosting participants from Say HI to Sustainability, a project funded by the Norwegian governmental organ Norec (former FK Norway), which is a part of the Norwegian foreign affairs ministry. The aim of Say HI to Sustainability is to foster sustainable travel, gathering and sharing valuable tools and ideas to create a Sustainability Strategy around the Hostelling International network, focusing on the importance of local products, services and activities. Within the frame of the project and aiming to always follow HI mission and make the hostel more sustainable, HI Montana hosted many events during 2018, such as book exchanges, garage sales, documentary nights, and social events. Further, the hostel started sustainable practices such as a box in the reception filled with toiletry left by guests to be picked up from new guests, a book shelf in the living room with books free to exchange and sustainable posters around the hostel.

HI Montana is engaged with sustainability and wants to keep following the HI mission, being an example for other hostels and for guests all around the world. Thus, we believe that our project should be funded, as a garden would enhance what HI Montana has been doing so far. We also believe that a community garden will have several positive effects for the local environment, such as water filtration, carbon storage, and fresh organic fruit and vegetables for the guests and the local community, strengthening the ties between the hostel and its neighbourhood, and giving the guests a greener and fulfil travel experience.

[Click here to vote now](#)

Communication plan for guests and stakeholders

Communication in the hostel: Our idea is to create signs and posters and leave them around the hostel, so the guests will know about the sustainable garden and the competition. Our vision is to design some wooden signs directing the guests outside, so they can go and see what is being planted, pick up herbs and vegetables and see how they can help. We also want to leave some signs in the breakfast area, when we have picked vegetables, herbs or fruits from the garden, so the guests would know that they are eating something that grew here in Montana.

Digital communication: We will also feature the competition by uploading pictures on social media and to our websites. We want to take pictures of the process of implementing the garden, and the grow of the plants and vegetables. We plan to do it by using the Bergen Montana volunteers page and the Say HI to Sustainability page, both on Instagram and Facebook, as well as the hostel's Facebook page.

Facebook

- <https://www.facebook.com/sayHltosustainability/> - 1.260 followers
- <https://www.facebook.com/volunteering.norway> - 1.554 followers
- <https://www.facebook.com/Hi.Bergen.Montana/> - 692 followers

Instagram

- <https://www.instagram.com/sayhltosustainability/> - 1.163 followers
- <https://www.instagram.com/volunteeringnorway/> - 293 followers

Websites

- <http://www.volunteering.no/>
- <http://www.montana.no/en/>
- www.sayhltosustainability.com/

[Click here to vote now](#)

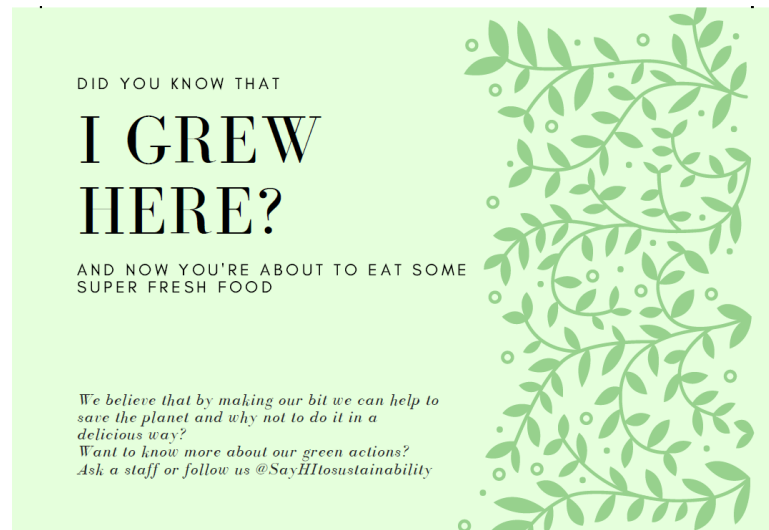


Figure 6: Sign to be used in the breakfast room from <http://sayhitosustainability.com/>



Figure 7: Sign to be used in the garden from <http://sayhitosustainability.com/>



Figure 8: Sign in the guest kitchen from <http://sayhitosustainability.com/>

[Click here to vote now](#)