

1. Main objectives of the project activity

Recovery of outdoor terrace space as an educational and exchange space around urban agriculture and sustainable bioconstruction methods and the use of renewable energy.

- Application of construction methods without CO2 emissions and energy efficient.
- Creation of green areas for air purification in urban areas.
- Improve our policy of low emissions and energy efficiency of the hostel.
- Promote closed cycles of reuse of organic solid waste.
- Points of ecological awareness and promotion of sustainable alternatives in the community.
- Creation of educational and training spaces in sustainable technologies, awareness of energy savings and improving information for people who visit us.
- Reduction of CO2 emissions.

2. Calculation of the CO2 emission reduction estimates (in tons) of the project. (Please provide calculations and an estimate of how the hostel will reduce its carbon footprint) (You can request these estimates from the supplier that collaborates on the project)

The total estimate of CO2 reduction in this project is 7 tons per year. Broken down into the following concepts:

- Reduction for the installation and use of solar panels:

3 tons of CO2 per year

- Bioclimatic construction reduction:

Wood is the only building material that continues to absorb and store CO2 from the atmosphere throughout the life of the building. Something very important especially in urban environments where the concentration of emissions is high. Therefore, in the two ways that exist to reduce CO2 in the atmosphere: avoid emissions or detract and store it, wood is the only material that combines both capacities.

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Each ton of cement produced by the conventional system produces a ton of CO₂ by replacing it with a ton of wood we reduce **1 ton of CO₂ in construction.**

- Reduction due to the cultivation of plants and composting of the organic waste that we generate:

2040kg of CO₂ saved per ton of composted waste.

1 m² of an active urban garden can generate the oxygen that a person needs in a year.

1 m² of an active urban garden can absorb about 50 grams of carbon dioxide (CO₂) in a day.

(10m² x 50gr x 365 days) = 1.825 Kg per year of CO₂ we reduce.

1 m² of an active urban garden is able to dampen the ambient temperature in 5° in winter and summer.

1 m² of an active urban garden is able to reduce noise pollution by up to 10 decibels.

3. To which Sustainable Development Goals does the project contribute?

The action-oriented, self-educational approach of the Scout Movement is in a unique position to help young people become active citizens and contribute to sustainable development.

More than a third of the 169 SDG goals highlight the role of young people and the Scout Movement's approach based on non-formal education is directly linked to objective 4 on Quality Education. The 17 SDGs are fully aligned with the mission of the Scout Movement: "Help build a better world where people realize themselves as individuals and play a constructive role in society"



4- Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

7- Affordable and Clean Energy

It aims to ensure that all people have access to an economically affordable energy service, which does not harm the well-being of the people or the

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environment and that allows to maintain a stable supply of energy production. Energy is essential for the daily life of all people and essential for achieving sustainable development. Guaranteed, affordable and adequate access to energy is part of the right to a decent standard of living.

9- Industry, Innovation and Infrastructure

It seeks to strengthen human and economic development, providing people with **sustainable infrastructures**, which allow citizens an affordable and equitable access for all people, building **resilient infrastructure**, promoting inclusive and **sustainable** industrialization and fostering **innovation**.

11- Sustainable Cities and communities

It proposes to rethink among all social agents the design of our cities, looking for greater efficiency in our buildings and settlements, as well as changes in our mobility, and to encourage the increase in the use of renewable energies in our daily activities. The reduction and recycling of waste, the food we consume every day, the use of energy to maintain the comfort of our homes, the importance of green areas and their care, are fundamental elements to achieve the goals of this objective.

12- Responsible Consumption and Production

12.2 Achieve sustainable management and efficient use of resources.

12.5 Reduce waste generation through prevention, reduction, recycling and reuse policies.

12.7 Promote sustainable contracting practices.

12.b. Sustainable tourism.

12.c. Appropriate policies for fossil fuel reduction.

13- Climate Action:

13.3 Improve education, awareness and human and institutional capacity regarding climate change mitigation, adaptation to it, reduction of its effects and early warning

15- Life on Land

Protect, restore and promote the sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and stop and reverse land degradation and stop biodiversity loss

4. Methodology

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4.1 Bioconstruction: Geodesic dome + training workshop

A geodesic dome is a half-sphere shaped structure composed of a network of triangles. The triangles create a three-dimensional structure that directs the forces and transmits the loads optimally following the patterns of nature.

This spherical shape provides the strongest possible structure with the minimum amount of materials used not generating waste in the construction. The main material is wood that has the following advantages:

- It is a natural, renewable and biodegradable material.
- Does not cause damage to human health or the environment.
- It is very stable against temperature changes.
- Does not cause damage to human health or the environment.
- It is very stable against temperature changes.
- It is able to absorb and evaporate water from the environment.
- It is the only building material that does not emit CO2 during its production.
- The energy required to make a wooden beam is much less than for a concrete or iron beam of the same characteristics.
- It is an excellent acoustic, thermal, electrical and magnetic insulator.

Wanting to take advantage of the terrace space as a common and training space for the hostel we opted for this mode of construction compared to the traditional urban building systems for the characteristics mentioned above. (minimum use of materials, energy efficiency ...)

Believing strongly in the importance of expanding the culture of responsible construction, a national company specializing in domes is contacted to carry out the construction training workshop.

This workshop is aimed at both the scouts and the hostel staff who will subsequently be responsible for maintaining it.

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The main objective of this training course is that it can be replicated in different parts of the world. Therefore, it is essential that the public that participates are scouts for their commitment to the environment as well as to collective structures. Achieving the creation of a network that promotes responsible construction.

The course is divided into two principal parts:

- Theoretical class and construction of triangles

A theoretical class will be carry on in which the procedure to be followed for the construction of the dome will be explained. Then we will go to the workshop and make the necessary triangles for the construction of the geodesic structure. In the afternoon we will start to mount the dome.

- Domo construction

Throughout the day we will finish assembling the structure.

Once finished, another theoretical class will be taught in which we will see how to build a door, windows, insulation, decorations.

Building a geodesic dome can be a wonderful experience, in which you learn to design a more authentic, healthier, less aggressive space with the environment. While being inside one of these constructions is something magical, the feeling is much bigger if we are the ones who have built it.

4.2. Urban garden and composting.

An ecological urban garden is a space, either in cultivation tables or in pots, in which we sustainably grow vegetables and aromatic plants that we will later enjoy in the kitchen. During its growth we put in place agroecological techniques so that the production of our food is natural and at the same time well planned to save us money, time and work.

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As determined by FAO, the promotion of urban agriculture framed by the rapid growth of cities helps to provide fresh food, generate employment, recycle urban waste, create green belts and strengthen the resilience of cities to climate change.

The urban garden has the function of giving knowledge of **seasonal crops**, socially forgotten due to the current possibility of buying vegetables and fruits from anywhere in the world and at any time. A great enjoyment for the senses of all people, but we forget the high cost that is environmentally due to the carbon footprint and the water footprint of the production and import of these foods from such remote places.

You could not leave without mentioning the serious condition that can produce on human health the consumption of products with a large amount of agrochemicals or the lack of properties and vitamins that these vegetables and fruits would naturally have, but being matured in cold stores, never develop these nutritional benefits by losing contact with the roots of the plant. Last but not least, the effects on **food security** that it causes on producing countries in which the consumption of their own inputs is denied because they are mostly exported.

In addition, the garden not only focuses on the cultivation of plants and vegetables, where you want to make a **calendar of seasonal cultivation** and **native varieties**, but also the importance of space within the urban environment where you go through making an **ecological refuge** for species that are naturally in the middle and are displaced by anthropic action.

Therefore, in addition to the cultivation terraces, actions such as building an **insect hotel** will be proposed, this is a construction, which will help us fight and control possible pests that can affect our crops such as caterpillars, aphids or cochineal, in addition It serves as a refuge for crisopas, bees, ladybugs or siphids, all of which are known as garden allies. These types of shelters serve to increase the production of up to 20% thanks to the pollination action that these animals perform. It is vitally important to give the opportunity to stop as far as possible the already sounded, decline of bees, vital to avoid the human collapse that is expected without them.

In response to the possible question if you can pose a danger from having bees or wasps near our space, the bees and wasps that come to these types of shelters are bees or solitary wasps, and they cannot afford to be aggressive such as hives workers or hornets (social). This is because while the “social” bees or wasps have a fertile female well protected, the solitary ones are independent and each female must take care of her offspring, being necessary to stay alive.

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Together with this we propose another type of workshops such as promoting knowledge of the **local birdlife**, with construction of birdhouses and drinking points for these, which will further promote its proximity as they currently show their presence due to the large number of green areas that exist around our location. It is noted for the wide variety of birds that visit us in the vicinity of our facilities.

For preserving this rich urban birdlife, where have been observed goldfinches (*Carduelis carduelis*), pigeon (*Columba palumbus*), great tit (*Parus major*), blue tit (*Parus caeruleus*), magpies (*Pica pica*), white wagtail (*Motacilla alba*), Blackbirds (*Turdus merula*), swallows (*Hirundo rustica*), starlings (*Sturnus unicolor*), Argentine parrots (*Myopsitta monachus*), swifts (*Apus apus*), common house martin (*Delihon urbica*), sparrows (*Passer domesticus* and *Passer montanus*) propose this type of actions where a **local ornithological recognition guide** will also be created, for the use and enjoyment of the people who visit us.

What we are looking for with this type of actions is to bet on biodiversity, so necessary to maintain our ecological environment of good quality.

We will carry out programs with schoolchildren and scout groups in which the following factors will be promoted through the garden:

- Promote **an awareness of care** and **respect** for the environment.
- Promote **values** such as patience, responsibility, commitment, companionship, etc.
- Promote **collaborative and cooperative work** by sharing tasks (planting, watering, cleaning weeds, etc.)
- Know the **native products** and identify those that are **typical of the station**.
- Promote **a healthy and balanced diet**. Identify the **urban fauna** that surrounds us, and know the benefits of maintaining a **biodiversity** in our environment.



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Following the line of recycling organic waste, the implementation of a **composter** is proposed. This is a container where the organic matter that comes from the remains of the kitchen of the Hostel is decomposed with the aim of reusing these wastes and reinstating them in the nutrient cycle, since after the process produced in the composter, we obtain a fertilizer that improves the quality of the soil, converting the waste into nutrients and with its return to the soil are available and used by the plants.



In November 2013, a study was carried out by *Friends of the Earth* where it is stated that the **composting** of organic matter would **reduce CO2 emissions by 65%** in waste management and contribute to **combating climate change**, in this study It takes into account the transport of organic waste from its generation point to the treatment area, and includes the energy consumption of water and electricity in the treatment plants, these variables would be suppressed absolutely and immediately so that the composter is An ideal solution for our space. According to the report 'The composting: recipe to reduce the carbon footprint in Spain' by *Friends of the Earth*.

4.3 Use of renewable energy: installation of solar panels

Solar energy has numerous benefits that place it as one of the most promising. Among its benefits is that it is a renewable energy, it is abundant, respectful of the environment reducing the use of fossil fuels and energy imports, its availability covers the entire planet, is silent, reduces electricity costs, does not require great maintenance and contributes to sustainable development where it is implanted.

Scout Madrid Hostel is a partner of Som Energia, a non-profit green energy consumption cooperative. Its main activities are the commercialization and production of renewable energy. They are committed to promoting a change in the current energy model to achieve a 100% renewable model.



We want to produce electricity in our facilities from renewable sources (sun, wind). The project has been designed by the Ecooo team of engineers.

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Ecooo is a non-profit company founded in 2005 and focused on all kinds of projects that activate citizens in favor of a new energy model, clean, sustainable and in the hands of people.



The installation of 10 solar panels with a power of 3,205 Kwh

Avoiding the emission of 3 tons of CO2 every year and a 3% saving on the electricity bill.



5. Monitoring and Evaluation

In order to evaluate the good development of the project during and after its execution, as well as to detect correction measures in case of failure in any of the activities implemented, different monitoring mechanisms will be established:

- Dome technology monitoring:

- Establishment of a construction calendar and its work plan (depending on the completion of the course)

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- Number of enrolled in the course, where it will differentiate between staff and scouts
- Reports of periodic review of the state of the dome, according to the criteria established by the company that will carry out the course and the construction, through a calendar to be distributed among permanent staff and users of the Scout Madrid Hostel, such as scout groups
- Number of people who replicate this technology in their environment
- Memory of activities carried out in the dome space (courses, exhibitions, talks ...)
- **Garden and and compost monitoring:**
 - Kg of reused organic matter, in its conversion into the amount of kg of compost produced and effectively used
 - Amount of food produced that is reused by the Hostel, from a harvest inventory
 - Memory of training activities in urban agriculture carried out in the garden space
 - Colonization of the insect hotel
 - Increase in the presence of birds that live near the Hostel
- **Solar panel installation monitoring:**
 - Kwh producidos con placas solares anualmente

6. Contribution of the project activity to the ten areas of sustainable Hostelling

- Our people: taking care of our staff by creating spaces that bring nature closer to the urban environment. In addition to the training component that helps recycle and grow personally within your work space.
- Our community: spaces are created for collective exchange that seek to connect the people of the neighborhood and the scout movement.
- Our friends: we encourage participation in different tasks that involve sustainability and offer a responsible eco-tourism alternative in Madrid.

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- Mobility: through the courses and workshops, the use of means of transport such as the bicycle for which parking facilities inside the hostel will also be promoted.
- Sustainable consumption: the use of food from the garden for self-consumption will be promoted.
- Nature: through the composter we help a continuous reduction of the waste generated (especially organic). In addition to the construction of the dome, although it is a punctual impact, it generates a minimum construction waste.
- Our hostel: we apply construction methods without CO2 emissions and energy efficient and also create green air recycling belts in urban context.
- Protecting destinations: in the collective space of the dome, both training and cultural activities are promoted, taking advantage of the acoustics of the structure, (concerts, exhibitions ...).
- Continuous improvement: The offer of new services and energy efficiency will help in our goal of quality of our services.
- Financial sustainability: The offer of educational and training activities around the care of the environment and the offer of innovative resources such as the garden or the use of the DOMO as a multipurpose room can attract many more customers to our Hostel which translates into more income. The energy savings produced by the installation of solar panels will also help economic sustainability.

7. Environmental, Social and Economic Impacts

- Economic savings on the electricity bill. For the generation of Kw with solar panels.
- Increase in occupancy therefore increase in income.
- Social impacts, in raising awareness of our environment and customers through the use of renewable energy and responsible construction.

8. Environmental Impacts

- Reduction of CO2 emissions
- Increase in biodiversity

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- Maintenance of local crop varieties
-

9. Economic data of the project. Economic savings and Return on Investment (Estimation of savings in energy bills after the end of the product. Please indicate the alternative use of the savings generated and if these will be reinvested in actions related to sustainability)

DIRECT RETURN RATE OF THE INVESTMENT:

Part of the project	kWh/year	Price of kWh	Annual rate of return
Solar Generator 3Kwp	3.560 kWh saving	0,095 €/kWh	338,02€
TOTAL RETURN PER YEAR			338,02€

SOCIAL RETURN OF THE INVESTMENT:

Together with the two previous economic returns of the investment, we must add the social return of the investment, that is, each person who passes through the Hostel, observes and reads, is interested in the subject, as well as all the scout groups that participate in The educational activities of the garden, we can talk about several thousand young people, who are sensitized, who when they get home transfer part of what they have learned, who make a change in their daily habits thanks to the change in attitude, which will have a multiplier effect beyond the euros returned.

10. Why should this Hostel / project be funded ahead of others?

The Scout Madrid Hostel project is an initiative of Scouts of Madrid –MSC

We have opted to offer in Madrid the best accommodation for the young visitors of our city. We have optimized the spaces and equipment of the hostel especially for groups of different kinds, thinking of facilities where to develop events, conferences, courses, essays and different socio-cultural activities, being a participatory reference point with other associations and entities of an educational nature or social of our environment.

SCOUTS OF MADRID – MSC

We are the free time education movement responsible for Scouting in Madrid. We are part of MSC Scouts with more than 28,000 children, youth and adults, 12,000 families and 400 communities that make up the scout groups.

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We host young Scouts from all over the world and from Spain, hosting much of their national activities that take place in Madrid as assemblies, courses, workshops...

We are part of the Scout Movement, the Scout Movement is one of the largest educational youth movements in the world, with 50 million young people participating in 224 countries and territories around the world. As a growing movement, the Scout movement is deeply rooted in the context of local communities and is able to respond to the diverse needs and aspirations of young people. Through the Youth Program and its transformative opportunities for non-formal education, the Scout Movement contributes directly to the growth and development of young people, enabling them to be active global citizens and create positive change in communities around the world. With a long-term commitment to advance sustainable development, the Scout movement has the power to engage young people in an unprecedented effort to address some of the most pressing social, environmental and economic challenges facing our planet. To date, Scouts have already mobilized one billion hours of Community Service that contribute to the SDGs. Now, we are ready to take the next step.

The Scout Madrid Hostel, due to its location in the city of Madrid, has been hosting activities of the most recognized national and international NGOs that use our resources for their meetings, meetings and courses. Such as ACH (action against hunger) AI (Amnesty International, GreenPeace ... as well as other smaller groups.

We are a young hostel that from the beginning we have opted for a sustainable and ecological tourism following our Scout philosophy.

Commitment to Scout values on the care of the Planet.

The hostel is promoted and managed by non-profit entities that revert all their benefits in the same hostel project and the promotion of leisure education.

11. [Sustainable communication plan / ideas for lodgers and stakeholders: How will you ensure that guests and stakeholders know that they have won the competition and that the project is in operation? How will you communicate throughout the year? If available, provide signaling samples or other communication material](#)

In this case, the project itself has a great visibility component in the Hostel, since it acts on common areas of our place with the dome and the garden. Both will be visible to all guests, providing explanatory posters about the characteristics and activities we carry out in addition

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HI Sustainability Fund 2020



to the birdlife identification guides, with information on the program that would allow its implementation, that is, on the Fund for the HI sustainability. In the case of solar panels, a poster will also be included on how energy is currently generated in the Scout Madrid Hostel, where it is reported that the installation of solar panels has been possible thanks to this same program.

All this posters will be visible to all the people staying in the hostel, but we will also provide coverage in social networks. We currently have facebook and instagram (1,323 followers), where we publish continuously everything that is done in the hostel. In these we will publish photographs that cover the construction process of the different components of the project and even the broadcast on “fb live” and instagram stories is proposed both of some excerpts from the construction course, and of the different activities that, once underway , are carried out therein, always giving visibility to the HI Sustainability Fund. This will remain permanently as a collaborator of the hostel in the different social networks, in which, as we have said before, we have a large number of followers, and information about the program and its commitment will be given to achieve the transformation of the Hostel spaces in sustainable places that take care of the planet.

As we have already commented on another point, in our hostel we receive numerous worldwide recognized NGOs and we will personally take care of them knowing the project that we have been able to carry out thanks to Hi hostelling. These will serve as a national and international speaker.

We will request support from local administrations to disseminate it through the media and institutional portals.

Finally we will organize an event at the lodge where we will invite the representatives of the scout groups in Spain to show them the project carried out.

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