

**SALL**

# **DELIVERABLE 4.2: INTERIM IMPLEMENTATION ACTIVITIES REPORT**



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 871794

<b>WORK PACKAGE</b>	WP4 'Implementation of school living labs'
<b>TASK</b>	Task 4.2 Implementation of the school activities
<b>DUE DATE</b>	28th February 2022
<b>SUBMISSION DATE</b>	28th February 2022
<b>DELIVERABLE LEAD</b>	UDEUSTO
<b>DISSEMINATION LEVEL</b>	Public
<b>DOCUMENT NATURE</b>	Report
<b>AUTHORS</b>	Mariluz Guenaga and Iratxe Menchaca, UDEUSTO
<b>REVIEWERS</b>	Gisela Oliveira, CVIVA Rooske Franse, NEMO Pavlos Koulouris, EA
<b>STATUS</b>	Submitted

## Revision History

REVISION	DATE	AUTHOR / REVIEWER	ORGANIZATION	DESCRIPTION
0.1	15/12/2022	Mariluz Guenaga Iratxe Menchaca	UDEUSTO	Table of Contents
0.2	21/02/2022	Mariluz Guenaga Iratxe Menchaca	UDEUSTO	Final version for review
0.3	24/02/2022	Rooske Franse	NEMO	Review
0.4	25/02/2022	Gisela Oliveira	Ciência Viva	Review
0.5	26/02/2022	Mariluz Guenaga	UDEUSTO	Second version for review
0.6	28/02/2022	Pavlos Koulouris	EA	Final version for submission

The information, documentation and figures in this deliverable are written by the SALL project consortium under EC grant agreement 871794 and do not necessarily reflect the views of the European Commission. The European Commission is not liable for any use that may be made of the information contained herein.

# Table of Contents

Executive summary .....	4
1 Introduction.....	5
2 Monitoring methods and tools .....	6
2.1 Regular meetings with NCs.....	6
2.2 Sharing exemplary cases.....	7
2.3 Data collection.....	7
3 Activities and strategies followed to engage schools .....	7
3.1 Croatia.....	8
3.2 Cyprus .....	8
3.3 Israel .....	9
3.4 Portugal.....	10
3.5 Spain .....	11
4 Piloting supporting events.....	11
4.1 Case Clinics .....	12
4.2 Sharing Events .....	13
4.3 Conclusions .....	14
5 Exemplary school projects.....	14
6 Indicators .....	16
7 Next steps.....	16
8 Conclusions .....	17
ANNEX I - Piloting supporting events dissemination - emails .....	18
ANNEX II – Exemplary SALL school projects.....	21

## Executive summary

The 'Schools as Living Labs' (SALL) project is a Coordination and Support Action (CSA) funded under the Science with and for Society (SwafS) objective of Horizon 2020 (H2020), the Research and Innovation Programme of the European Union. In particular, SALL is a project serving Europe's aim to promote open schooling and collaboration on science education. Moving in this direction, SALL proposes the living lab methodology as a technique for the development of open schooling activities linked to science learning in Europe's schools. Further, SALL chooses to demonstrate the use of this technique through activities prioritizing a focus on the theme of the food system and its links to the Food 2030 research and innovation policy of the European Union.

The SALL team, including ten consortium members and three linked third parties, consists of institutions from twelve countries (Belgium, Croatia, Cyprus, Estonia, France, Greece, Israel, Luxembourg, the Netherlands, Portugal, Serbia, Spain) representing diverse worlds: schools, universities and research organisations, science museums and centres, NGOs, business. Dialogue and mutual learning among these worlds lie in the heart of SALL.

The present document constitutes deliverable D4.2 'Interim implementation activities report' of the SALL project, developed in the context of Work Package 4 (WP4) 'Implementation of school living labs'. The implementation started early in the project, in month 6, and will last until the end, month 36 (M6-M36). The deliverable provides an overview of the piloting of the SALL approach (methods and tools) in the first 12 months of implementation in the 10 countries involved, from month 6 to month 18. It concisely reports on the overall situation, the different strategies and tools used to monitor implementation progress, how the whole project and National Coordinators (NCs) engage and support schools in the piloting, a sample of exemplary projects in each country, and the success indicators achieved so far.

# 1 Introduction

Work Package 4 (WP4) of the 'Schools as Living Labs' (SALL) project is enabling the implementation of the living-lab-based open schooling methodology developed by SALL in the participating school communities. As an introductory statement, we would like to highlight the relevant aspect of WP4:

**Task 4.2. (M6-M36)** During the implementation of the living lab activities, the consortium will monitor and facilitate the co-creation living lab process to ensure that both the school activities as well as the evaluation activities (WP5) run smoothly and effectively. Progress will be checked regularly, together with the schools, to establish the needed support or any other action if required, making sure that this monitoring process remains practical and straightforward, with the minimal administrative burden to the schools. In parallel, the project will offer continuous support to the participating schools through the national coordinators, under the guidance and coordination of a central support office in UDEUSTO.

In the first phase of the project, WP4 dedicated effort to prepare the first phase of piloting starting in February 2021, with a target of involving 42 schools in 10 countries (the so-called Focus Schools). This initial piloting in the first project year served to evaluate the SALL approach and the outcomes from other WPs, i.e. mainly the SALL community platform (WP1), the Living Lab methodology, techniques and tools (WP2), the strategies for actively involving external stakeholders (WP3), and the methodology to evaluate the impact on participants (WP5).

We then moved on to large-scale piloting, aiming to eventually engage up to 412 schools in 10 countries by the end of the project. This piloting is the basis for elaborating the final versions of the resources and materials that the project will leave as a legacy to the educational community after its completion (W1, WP2, WP3), the mechanisms and strategies for introducing the SALL approach to schools, as well as for conducting an in-depth evaluation of the project's impact (WP5). The ultimate goal is to ensure the adoption of the SALL approach by the participating schools, and its sustainability and growth beyond the project. Involving such a high number of schools in so many countries is a challenge and, obviously, the difficult situations and uncertainty that all countries are experiencing because of the Covid-19 pandemic is an extra barrier we have been facing since the start of the implementation activities.

In this document, we describe the tools and methods used to monitor the progress of the implementation activities (section 2), some indicative activities and strategies followed by National Coordinators (NCs) to engage schools in the project after the first piloting phase (section 3), the piloting supporting events organized at project level (section 4), and the exemplary school projects that aim at inspiring present and future teacher participants of the implementation activities (section 5). In section 6 we present the achievements of the implementation activities in terms of quantitative indicators (M1-M18), and section 7 describes the future steps foreseen for the following months. We close the report with the main conclusions of the work done in WP4 over the last months (section 8).

## 2 Monitoring methods and tools

We have used diverse methods to monitor the implementation of SALL activities in the participating schools (see Figure 1). In coordination with WP1, we have held regular meetings with National Coordinators (NCs), in groups and individually, and discussed the particular and general needs that have arisen to give the best and most coordinated solution. In these meetings, we have shared the resources and materials developed in WP4 and other Work Packages (W1, WP2 and WP3) to facilitate their work as NCs, as well as resources and tools designed for schools. Throughout this process, WP6 has supported our work through dissemination and communication activities, and WP5 has assessed the impact of the approach proposed by SALL on the school communities. As a result of these efforts, the schools have been motivated and facilitated to carry out living lab-based school projects involving teachers, students and societal actors, following the SALL methodology, and using the resources available. As a sample of the work done, we have compiled some exemplary cases from participating countries, as presented further below in this report.

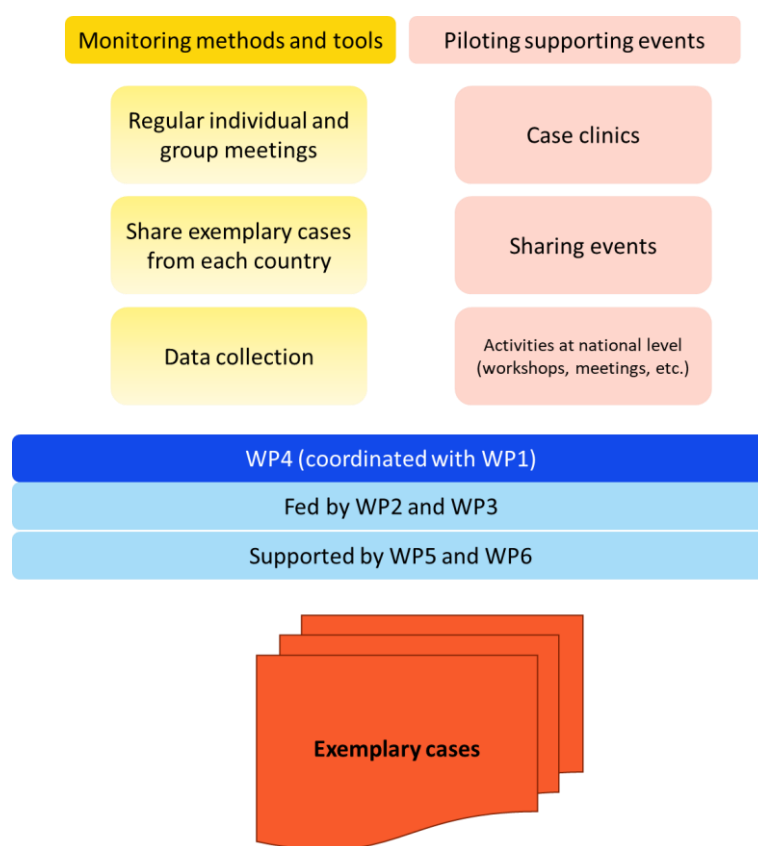


Figure 1. SALL piloting monitoring model.

### 2.1 Regular meetings with NCs

Since the start of the implementation activities and up to now (M6-M18), we have held regular meetings with the NCs, led by WP1 and WP4. In these meetings, we have addressed:

- The current situation of the piloting process in the participating countries
- The barriers and difficulties found in the different phases and how we can overcome them

- The need for materials, resources or activities to support the NCs or for them to support the schools
- The good practices and successful stories in each country so that they can be adopted and adapted by others.

## 2.2 Sharing exemplary cases

One of SALL's main assets are projects developed by participating schools. These real examples are inspiring for other schools that are already running SALL school projects or are just joining SALL for the first time. For this reason, we have focused on collecting, documenting and sharing exemplary cases that we identify in each participating country. The means used for this are:

- Periodic meetings with the NCs to identify and share good practices running in partner countries.
- The shared online workspace of our consortium (BSCW; restricted access), an internal platform where we collect first drafts of the exemplary cases, and the SALL community platform (<https://www.schoolofthefuture.eu/sall>) where we publish them in their final version as Accelerators.
- Events where teachers and students present their projects and share them with other schools (teachers and students). Such events are organized at the national level as well as at the international-project level.

## 2.3 Data collection

In parallel to other activities, we work on quantitative and qualitative data collection to monitor project implementation. We use shared documents to do so (e.g. Google forms and spreadsheets to fill data easily, BSCW as our collaborative platform for keeping documents, etc.). In coordination, WP1 and WP4 defined the Key Performance Indicators (KPIs) and the information needed to monitor project progress in each country, developed the data collection tools, distributed these tools among the NCs, and analysed the data collected. This information allows us to continuously monitor progress, identify incidents and intervene in early stages to correct possible deviations from the initial plan.

In addition, the SALL community platform will provide us with valuable automatically collected data on the activity of users in the platform (e.g. projects created, topics addressed, communities and their members, etc.). We have designed the data model used to automatically feed the KPIs throughout the implementation activities.

## 3 Activities and strategies followed to engage schools

One of the main challenges and milestones of SALL is the initial engagement of schools. When there is not a critical mass of participating schools, it is more difficult to transmit the experience of teachers and students and for them to attract their peers to the project. Once the project begins to have a larger number of communities involved (teachers, students, social agents), the testimonials, the call effect and

the word-of-mouth effect will reinforce the communication and dissemination activities of NCs and project partners for the incorporation of new schools. In the first months (M6-M12), we engaged focus schools (51 schools in 10 countries), a limited network of schools and communities in each country to connect with and, as a consequence, a limited number of experiences to share. In addition, each country and each NC faces different realities and needs in its territory. We cannot ignore the great impact added by the COVID-19 pandemic to the piloting in schools. It has had a significant influence in the workload of teachers and their motivation to engage in new projects, added to the successive waves of contagions, lock downs and other exceptional circumstances.

Nevertheless, the NCs have made a great effort to engage schools in SALL and support the development of living lab-based school projects following the methodology designed in the previous months. We have shared these strategies in the periodic meetings mentioned before, so that all NCs could benefit from the experiences and materials developed for individual cases. We have also shared the difficulties found to provide a coordinated solution to common issues and to support NCs in their specific issues in each country. To illustrate the diversity in how different countries support schools, we give the following selected examples.

### **3.1 Croatia**

The first step of BWI in involving schools in the SALL project after the first focus schools was to approach the school principals with whom we had previously collaborated on national and international projects and inform them about the SALL project. The first contact was made by phone at the beginning of the 2021/2022 school year to add the topic of the project to the school curriculum. This is how we involved the majority of Croatian SALL schools in the project. The rest of the schools we contacted with the help of our cooperating NGOs who have experience working with schools and suggested few more schools that would be potentially interested in participating in the project. Following their proposal, we contacted the principals of these schools individually (by phone or e-mail). Also, some schools, during their visit to the Lošinj Marine Education Centre, expressed their desire to cooperate on projects with the Blue World Institute, and we proposed and explained to them the topic and methodology of the SALL project, and some of them decided to join. When we gathered 12 schools, we organized an online meeting of national coordinators and participating schools from Croatia in the SALL project, where we introduced them to the aims, tasks, and activities. During the project implementation, we usually contacted teachers via Google Meet, WhatsApp, phone, and email where we provided individual support in the project implementation and administration of SALL community platform.

### **3.2 Cyprus**

UCY organized or participated in different actions for reaching school communities in Cyprus. For the first year of the project, schools that the NC has previously collaborated with were approached for creating the focus school community. For forming the wider community during the second year of the project, UCY launched an open call in collaboration with the Cyprus Pedagogical Institute and with the support of the Ministry of Education, Culture, Sport and Youth for disseminating the project and inviting all schools in Cyprus to participate. The open call was also disseminated in the NC network (social media



and emailing lists). A representative of each school interested in the SALL project participated in an online workshop during which the SALL methodology was presented, as well as practical information regarding the implementations. The workshop and the subsequent discussion with all the participants were recorded and uploaded in the NCs website, as well as the SALL's platform Library section for reference or for schools that were unable to participate.

The NC also presented the SALL project in different local conferences in which teachers and educational stakeholders participated for recruiting new schools and disseminating the project. UCY also frequently communicates with the schools through weekly emails with updates about the SALL project (e.g., news packages, newsletters, invitations for case clinics and other events organized in the context of the project or related to the project). Another strategy of the NC is to do regular posts on their Facebook page regarding updates about the project or examples of school living lab projects in Cyprus as a way for schools to present their work and for informing interested parties about the project. In addition, one-to-one communication with a school representative (mainly through phone calls) is a usual strategy for providing support and also for monitoring purposes. This type of communication is either initiated by the NC (approximately once every two weeks) or by the schools. Lastly, the option for school visits (virtual or physical when the covid-19 regulations allow) is provided for all schools either for presenting and/or discussing aspects related to their school project with teachers and administration staff or for organizing a brainstorming session with the participating students for motivating them and facilitating the selection of a targeted issue related to their local community (four brainstorming sessions have been implemented thus far).

### 3.3 Israel

In our efforts in reaching school communities, ORT Israel acknowledges the teachers' prominent role in creating Living Labs and maintaining their sustainability. We know that in order to participate, harness students and succeed in the project, teachers need the appropriate knowledge, competencies and tools, as well as the understanding of the overall framework and context. Therefore, our strategy for engaging schools focuses on helping the teachers by providing them with what they need, thus making their participation in the project more feasible for them. This strategy comprises of three types of meetings with the participating schools (not including meetings and events for recruiting new schools to the project):

**1. Teachers' trainings:** Since the beginning of the project we conducted 8 large meetings with our teachers. In these meetings we introduced the SALL project as a whole, invited experts to give professional talks regarding a variety of food related topics, brainstormed with the teachers for project ideas, and discussed with them about the challenges.

We also conducted several workshops, based on tools we developed for our teachers in the framework of SALL, including:

- How to plan a Living Lab project at your school.

- How to increase the community members' involvement in the project and to improve their collaboration.
- How to use SWOT analysis with your students for enhancing teamwork.
- How to motivate students towards a career in STEM subjects

**2. Lectures for students:** We conducted 3 large-scale lectures for students on food-related topics, given by experts and entrepreneurs. These lectures were given online, with hundreds of students participating in them.

**3. Personal meetings:** At the beginning of the large-scale implementation (during the second year of the project), we initiated personal or team meetings with the teachers of each and every of the participating schools. These meetings came to be very significant, allowing us to hear the teachers' varying needs and specific challenges, and thus providing tailor-made assistance accordingly. These meetings turned out to be very significant, and no doubt they contributed to our teachers' competency and confidence (as well as to our own understanding of what it takes to initiate and operate a Living Lab in schools).

We plan to meet each school team two more times from February to April 2022: at the middle of the year (starting March) and at the end of the year (for finalization of the projects, conclusions, and preparations for next year).

### 3.4 Portugal

To involve schools in the SALL project, Ciência Viva organized training courses for teachers on food systems, focusing on some of its aspects, having addressed the SALL project and the Living Labs methodology, with an exercise that simulates the co-creation step. This exercise consists of simulating a meeting between school elements (teachers and students) and social actors, to find a possible solution to a problem presented to them. In a role play situation, each group had a different problem, and was tasked with coming up with some solutions and voting on which would go forward to prototype. With this training, it was possible to provide teachers with the necessary knowledge about food systems, but also about a specific situation related to the Living Labs methodology, on which the SALL project is based.

Several webinars were held to present the SALL project, focused on the Living Labs methodology, with different ways of approaching the problem encountered by students and how to involve social actors in this process. These webinars were intended to make the project known to the school community, and encourage enrolment by schools.

As dissemination actions to attract new schools, SALL was presented at the event Ciência Viva Teachers Academy, in a face-to-face format at the Pavilion of Knowledge and information was sent by e-mail via newsletter to teachers and direct e-mail to coordinators of the Ciência Viva Science Clubs in School.

### 3.5 Spain

In Spain, UDEUSTO have followed different strategies to involve schools in the SALL project. One strategy we used for making SALL known to teachers, school heads and other interested people was the usual channels of our team: social networks, blogs, generic and personalized emails, meetings with education departments, articles, meetings and conversations with interested people, etc.

Once they were aware of the existence of the SALL project, we held bilateral meetings (online or by telephone) to explain in detail what it means to participate as a school. We have also held open meetings for all interested people, but it is always necessary to organise several meetings between Deusto and the school to get them definitively involved in the project.

Another successful strategy to engage schools was the organization of workshops where we invited Food System agents and schools participating or interested in participating in SALL. The agents explained their activity, and identified challenges that are appropriate for becoming school projects. In the second part of the workshop, the participants (mainly teachers) could ask questions, share, or comment. We had organized two workshops so far (14/04/2021 and 23/02/2022) with very positive results:

- 1) participants have seen a wide and varied set of people and organizations with which they can collaborate as external agents (NGOs, companies, research institutions, public bodies, etc.),
- 2) these agents have brought challenges based on their real and daily experience, and
- 3) schools have had the opportunity to hear the testimony of other schools that have already participated in SALL or that are in other phases of the project.

## 4 Piloting supporting events

Thanks to the meetings and conversations with the NCs, we identified the need to explore certain themes in greater depth with teachers (e.g. the phases of the methodology, tools and resources, type of activities, etc.), and NCs also noticed a need among teachers to have contact and share their experience with teachers and students from other European countries. To facilitate this, we designed two types of events: case clinics and sharing events.

1) **CASE CLINICS.** Events in which members of the consortium and invited experts explain the fundamental concepts of the SALL methodology, those that NCs and consortium members have identified as the most challenging for the schools. We have defined a series of events where some members of the consortium explain part of the methodology and resources available and, afterwards, the participants (mostly teachers) ask questions, comment, or express their concerns about it. If the number of participants is enough, we divide the large group into smaller groups for discussion and to encourage greater participation and mutual understanding.

2) **SHARING EVENTS.** Events aimed at sharing the experience of schools throughout the project. Teachers and students present their work in different stages of development, explain how they have identified

the topic, the social agents involved, the prototype developed and many other issues of interest for the rest. These events are a showcase to share and learn from each other, to inspire and be inspired. In addition, it allows to connect schools in the same country and internationally based on interests, educational levels or topics covered.

## 4.1 Case Clinics

We have planned three case-clinics from January to April 2022.

- 25th January - Case Clinic 1 on "How to select the challenge".
- 14th March - Case Clinic 2 on "How to engage societal agents".
- 1st April - Case Clinic 2 on "How to prototype"

Dissemination material for the first two Case Clinic available in Annex I.

### 4.1.1 Case clinic 1 on "How to select the challenge"

37 people registered for the event and 32 took part in the first online Case Clinic. Our partners from ORT Israel presented the topic and their experience as NCs in Israel.

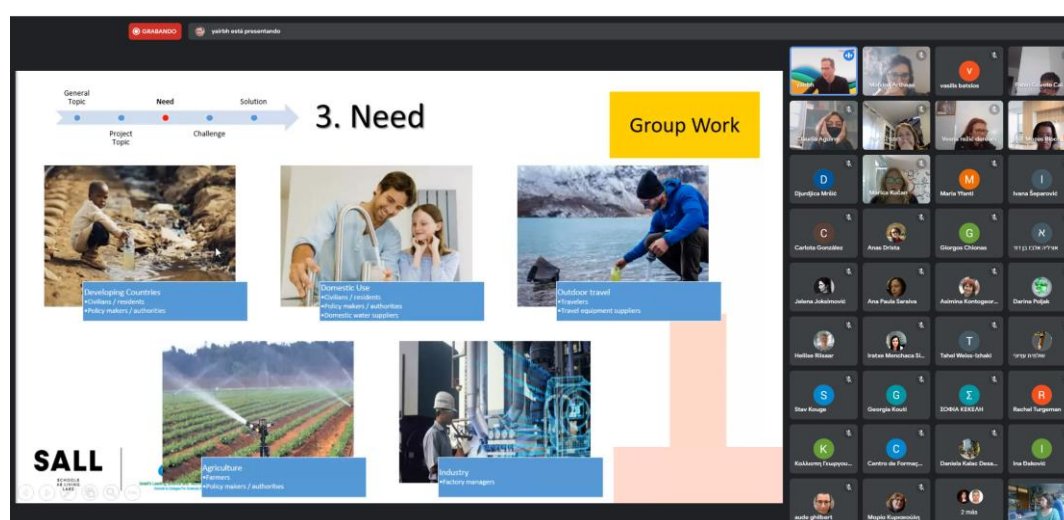


Figure 2. ORT Israel project members explaining on the topic "How to select the challenge".

After the explanation, we had time for an open debate, exchange of ideas and questions from all participants.

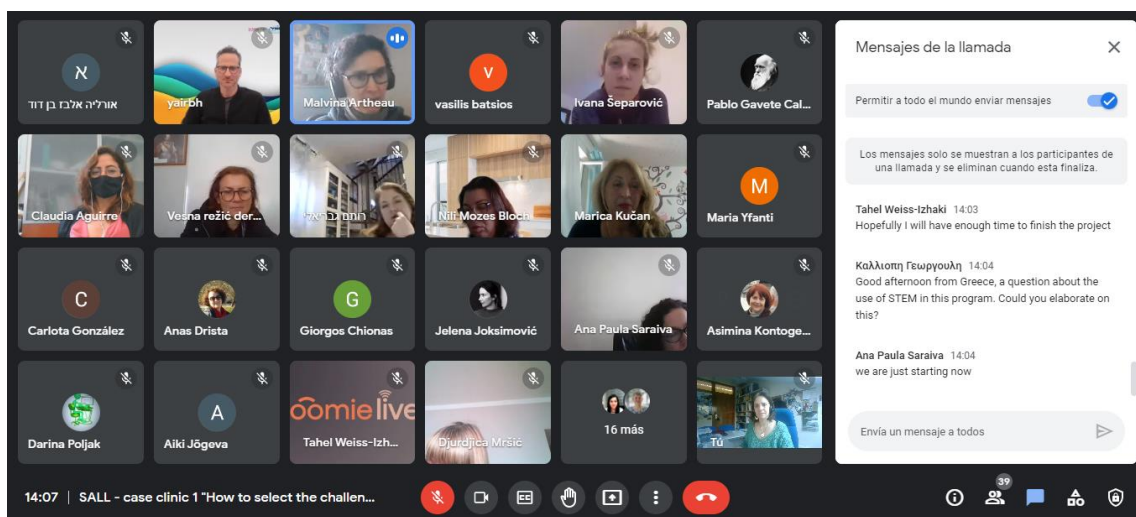


Figure 3. Open debate after the presentation of the topic.

## 4.2 Sharing Events

We have planned three Sharing Events from January to April 2022.

- 1st February. Sharing Event with teachers.
- 8th March. Sharing Event with teachers and students.
- 4th April. Sharing Event with teachers and students.

Dissemination material for the first two Sharing Events available in Annex I.

### 4.2.1 1st February. Sharing event with teachers

33 people registered and 25 took part in the first Sharing Event. The following schools presented their project.

SCHOOL	PROJECT NAME	COUNTRY
Lycée Hénaff	Garden Club	France
ORT Grinberg	Preventing food waste	Israel
Monseigneur Feuilletaut	Community garden on a land damaged by floods	Canada
Petar Kočić	Wonderlab	Serbia
Re'ut for Arts middle school	Campaign for preventing excessive use of disposable dishes	Israel
Xplore Agora	A challenging school as living lab	The Netherlands
ORT Dafna	Disposing Disposables	Israel
Nautical school Bakar		Croatia



Figure 4. Teacher from Agora Amsterdam explaining their SALL school project.

### 4.3 Conclusions

The experience, after the first two events, is very positive. We consider that organising these supporting events has been useful for the participants (e.g. teachers, NCs) and there has been a great participation. During the events, teachers felt confident on sharing their experience but also their doubts. The interaction, questions and comments was high and valuable.

In addition, we have seen that sharing and seeing the projects that are being developed in other schools and countries encourages teachers and other staff from schools to keep working with the SALL methodology and approach. We have seen that the first barriers and fears teachers have are overcome with the resources developed in the SALL project and with the support of the NCs, as well as the collaboration between schools and community agents.

## 5 Exemplary school projects

One of the main needs detected in the implementation of school projects is to have examples of projects already developed that inspire teachers that are starting their own projects. When NCs explain the SALL approach in schools, teachers need to know concrete examples, what topics they deal with, the subjects in which they work, the phases for their development, the type of social agents involved or the type of prototype that is generated. In addition, they need to know a wide range of projects from which they can choose (or get inspiration from) the one that best suits their needs and the reality of their classroom. This is a repeated demand and the consortium is working to give an appropriate response. To this end, we have designed a template that includes the main characteristics of the school projects and we have

asked the NCs to share the most outstanding ones in their country. This is a task that we will continue to carry out with those projects that we find particularly inspiring and that can serve as accelerators for the development of new projects in schools.

In the table below, we show the inspiring projects selected in the first phase. In the Annex II there is a complete description of each project.

PROJECT TITLE	SCHOOL	COUNTRY
The environment is cleaner when the reusable is here	ORT Dafna	Israel
Sustainable and healthy food	Christelijk Lyceum Veenendaal	The Netherlands
Evaluating food packages used by food production companies	The Junior & Senior School	Cyprus
Raise awareness concerning environmental problems	The International School of Paphos	Cyprus
School garden	Muraste school	Estonia
Composting food waste	Gaia School	Estonia
Challenge yourself for sustainability!	CED Pina Manique - Casa Pia	Portugal
Combate ao desperdício alimentar: refletir e agir	Escola Básica Pedro Jacques de Magalhães	Portugal
WonderLab	OŠ "Petar Kočić"	Serbia
Garden club	Lycée Hénaff	France
Kroz tradiciju i suvremenost, od vrta do stola / Through tradition and contemporaneity, from the garden to the table	Osnovna škola "Jelenje-Dražice" / Elementary school "Jelenje – Dražice"	Croatia
"Hrana s našeg otoka" / Food from our island	OŠ Maria Martinolića / Elementary school Maria Martinolića	Croatia
The revolution of 3Rs (Reduce - Reuse - Recycle) - Waste management in the school	Primary School of Stavradi - Ioannina	Greece
Analysis of the eating behaviour of the students	Colegio Jesús-María Ikastetxea	Spain
Menu osasungarriak guztientzako! (¡Menús saludables para todos/as!)	San Felix Ikastola	Spain

## 6 Indicators

The progress of SALL piloting is also measured through the use of the quantitative indicators included in the description of the project. In the following table, we show the target indicators and the numbers (and percentage) achieved at this moment in the project (M1-M18).

	TARGET	ACHIEVED	%ACHIEVED
Min. no. of schools involved	412	203	49%
Min. no. of countries involved through schools	10	10	100%
Min. no. of teachers involved	1,000	480	48%
Min. no. of students involved	10.000	4.573	46%
Min. no. of schools' Living Lab projects	200	175	88%

We consider the achievements of the project to be positive. Despite the difficult circumstances we have had to face to develop the activities in the schools due to the pandemic, we have achieved to engage more than 200 schools in 10 countries that are developing 175 school projects following the SALL methodology. A total of 4,573 students are working on these projects, almost 50% of the initial estimate.

The projects are at different stages of development. Some schools have just joined SALL and are still identifying the challenge to be addressed in their schools. Therefore, these projects are not yet counted as such. Others are in the phase of ideation and generation of solutions, or in the prototyping of these solutions. Some, mainly the schools that belong to the focus schools of the first piloting phase, have completed a full cycle of the methodology and they are developing new projects in the schools.

## 7 Next steps

Now that large-scale piloting is underway, we see the need to continue with the following activities:

- Organize more events at national and European level to share experiences, support communities and gather new needs. We will keep organizing Case Clinics and Sharing Events, among others.
- Spread the word about the living lab open schooling methodology and the opportunities offered to schools through their participation in SALL, even more widely in the participating 10 countries and across Europe, so as to engage more school communities in the project. To this end we are currently developing new incentive schemes in the form of contents to be organised from spring 2022 onwards, as well as the "SALL Summer School 2022", a European teacher training event aiming to further familiarise with the concepts and methods of SALL, to be held in Marathon-Athens, Greece, on 3-8 July 2022.
- Further work on the data model and automatic data collection through the SALL community platform, which will allow us to have updated information to monitor project progress and for decision making.



- Continue the work of collecting exemplary cases in the form of documents, guides, or videos to share and inspire SALL teachers and new schools that want to join the project or will want to adopt the SALL methodology in the future.
- Encourage schools and teachers to use the SALL community platform as a valuable tool for sharing their projects, connecting with other schools and creating a network of schools working on similar topics, following a common methodology and opening to their communities. NCs will support schools in completing data in the platform to minimize the administrative workload.
- Feed the SALL community platform with content, ensure the presence of schools, and create communities around the topics of interest. If the platform has interesting content and added value for the teachers and schools, they will be more attracted to use it and, in turn, they will feed this dynamic of value.
- Through the mentioned events and other activities, connect teachers, students, and schools to meet, share and collaborate within the framework of the project and beyond. The SALL community platform is also a key element to favour this connection, so we will work on all aspects to make it useful, valuable and usable for the participants.
- Look ahead to the third year in which schools will increasingly choose to address other themes, too, in addition to the theme of the food system.

## 8 Conclusions

In WP4, by M18 we have kept preparing and supporting NCs to facilitate schools in piloting the SALL approach, integrating the work done in WP1, WP2 and WP3, as well as evaluation (WP5). NCs have been working together in different ways and strategies to transfer the SALL approach, the methodology, materials and resources so that schools and community agents can develop school projects on topics related to the food system and following the Living Lab methodology. We encourage the differences among countries because this gives partners the opportunity to fit the approaches to the different needs (e.g., cultural differences, differences in school systems). Sharing the different approaches is inspiring not only for the NCs but also for the teachers participating in the exchange activities organised.

After involving the first group of focus schools, NCs have kept contacting schools to engage them in the second phase of the project. With the experience gained during the first 18 months and through regularly sharing by NCs (strategies, strengths and challenges), WP4 continues to design materials and actions to engage and support schools in large-scale piloting, with the support of all WPs.

## ANNEX I - Piloting supporting events dissemination - emails



Dear teachers,

We, the team of the [Schools as Living Labs](https://schoolsaslivinglabs.eu) (SALL) project, would like to thank you very much for your participation in the activities of our project. We find your dedication to giving your students new, rich learning opportunities very inspiring!

(But also, even if your school is not yet active in the SALL network, please keep on reading! You will be able to find out more about SALL and participate in our sessions. We are also attaching some information on SALL here).

We are devoted to our promise to support you and your schools in the implementation of living lab-inspired school projects with your students.

For this purpose, we are currently organizing a series of sessions for you and us to discuss and address any challenges that you may be facing.

In the first session, on 25th January 2022 at 13:30-15:00 (CET), we will focus on this: "How to choose the topic of our living lab project? How to identify the challenge or problem in our community to address?"

### Agenda:

13:30 - Welcome.

13:40 - How to choose the topic, how to identify the challenge or problem to be addressed by the students in the living lab project. Presentation by members of the team of SALL.

14:00 - Open discussion. Ask questions, make comments, exchange experiences! Depending on the number of participants, we may work in small groups.

15:00 - Closing of the session.

Date: 25th January 2022

Time: from 13:30 to 15:00 (CET)

Registration form: <https://forms.gle/T8AqhNAdWhhrvzE89>

Link to connect: <https://meet.google.com/zvt-byor-djq>





The Schools As Living Labs has received funding from the European Union's Horizon 200 Framework Programme for Research and Innovation under grant agreement No. 871794

**SALL**

SCHOOLS  
AS LIVING  
LABS

[WWW.SCHOOLSASLIVINGLABS.EU](https://www.schoolsaslivinglabs.eu)

 OSTOGETHER

 OPEN SCHOOLING TOGETHER



Dear teachers,

We, the team of the [Schools as Living Labs](#) (SALL) project, would like to thank you very much for your participation in the activities of our project. We find your dedication to giving your students new, rich learning opportunities very inspiring! (But also, even if your school is not yet active in the SALL network, please keep on reading! You will be able to find out more about SALL and participate in our sessions).

The SALL project is also an opportunity for you to meet, share and learn from your peers across Europe, who share the same values and are eager to open schools to their communities. For this purpose, we invite you to a series of international and informal exchange **events** with schools working with the SALL project. **We want teachers to share with peers their experience developing SALL school projects.** You can either participate in listening or learning from others' experiences. If you would like to share your experience, contact us, your National Coordinator, for more info! Otherwise, register to attend (see the link below).

For the first session, on 1 February 2022 at 13:30-15:00 (CET), teachers will share their experience of developing a living-lab project with their students and societal actors.

#### Agenda:

13:30 – Welcome.

13:40 - Presentation of SALL schools projects from different partner countries.

15:00 - Closing of the session.

**Date:** 1st February 2022

**Time:** from 13:30 to 15:00 (CET)

**Registration form:** <https://forms.gle/T8AqhNAdWhhrvzE89>

**Link to connect:** <https://meet.google.com/zvt-byor-djq>



*The Schools As Living Labs has received funding from the European Union's Horizon 200 Framework Programme for Research and Innovation under grant agreement No. 871794*



[WWW.SCHOOLSASLIVINGLABS.EU](http://WWW.SCHOOLSASLIVINGLABS.EU)

OSTOGETHER

OPEN SCHOOLING TOGETHER



Dear teachers,

We, the team of the [Schools as Living Labs](#) (SALL) project, are devoted to our promise to support you and your schools in the implementation of living lab-inspired school projects with your students. The SALL project is also an opportunity for you to meet, share and learn from your peers across Europe, who share the same values and are eager to open schools to their communities. For these purposes, we are inviting you to a series of international and informal exchange **events** with schools working with the SALL project:

- **SALL Teachers & Students Events**: teachers and students share their experience developing SALL school projects.
- **SALL Case Clinics**: sessions for you and us to discuss "How to engage societal actors" and address any challenges that you may be facing, regarding this or other aspect.

You can either participate in listening or learning from others' experiences. If you would like to share your experience, contact us, your National Coordinator, for more info! Otherwise, register to attend (see the link below).

**Next Teachers & Students Event**

**Date:** 8 March 2022

**Time:** from 13:30 to 15:00 (CET)

**Link to connect:** <https://meet.google.com/hfj-gano-nes>

**Next Case Clinic**

**Date:** 14 March 2022

**Time:** from 13:30 to 15:00 (CET)

**Link to connect:** <https://meet.google.com/hfj-gano-nes>

**REGISTER:** <https://forms.gle/T8AqhNAdWhhrvzE89>




*The Schools As Living Labs has received funding from the European Union's Horizon 200 Framework Programme for Research and Innovation under grant agreement No. 871794*

**SALL**

SCHOOLS  
AS LIVING  
LABS

[WWW.SCHOOLSASLIVINGLABS.EU](http://WWW.SCHOOLSASLIVINGLABS.EU)

 **OSTOGETHER**

 **OPEN SCHOOLING TOGETHER**

## **ANNEX II – Exemplary SALL school projects**

# SALL exemplary school-project

## BASIC DATA

Project title:	The Environment in Cleaner When the Reusable Is Here
School name:	ORT Dafna
Country:	Israel
Number and age of students in the project:	25 students, ages 13-14
Number and profile[1] of teachers involved:	4 teachers: science teacher; pedagogical manager and English teacher; Precision Agriculture teacher; English teacher.  We have worked with the leading teacher in different projects in the past.
Subjects and topics addressed in the project	To decrease the outdoor use of disposable dishes in the general public
URL in the platform:	<a href="https://www.schoolofthefuture.eu/en/school/ort-dafna">https://www.schoolofthefuture.eu/en/school/ort-dafna</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A school in the Northern part of Israel. It is one of the best schools in ORT Israel network, with a variety of successful projects and collaboration in the past (including the OSOS project). The school manager is usually very enthusiastic about participating in new projects and getting in uncharted water. The leading teacher we work with (who is a science teacher in the school) has relatively a lot of independence at school and she has the ability to create good work teams for her projects.

## THE SCHOOL IN THE PROJECT

The school was very keen to join the SALL project, after a very good experience and collaboration with us (ORT R&D team) in the OSOS project. So it was pretty natural for us to invite them in and for them to accept our invitation.

## SALL METHODOLOGY

### **1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

This school addressed the environmental pollution caused by large-scale consumption of disposable tableware – especially plastic or other non-degradable bags and dishes people use when eating outdoors.

The teacher came up with this challenge at the beginning of the year. It was something she wanted to work on before, and this came to be a good opportunity for that. She worked with us (ORT R&D team) to hone it a little bit before taking it to her students, thinking together about the different ways such a project can take. The students themselves started with this big idea as a general challenge for the project and needed to make it more concrete (as in who will be the target users, what specific uses of disposable dishes will be the focus, where, when. etc.).

## 2. Stakeholders involved (name and profile, how and when they have participated, etc.):

- **Scouts group:** The scouts group frequently uses a small park near the school for picnicking during the year (once or twice a week in general). They were considered one of "the users" in the project. A few representatives from that group were involved in the initial brainstorming process to come up with ideas for solutions, along with the students. They also filled in a survey developed by the students. A few representatives from that group participated in a joint "Make-athon" event in school. Finally, the kids of that group also signed a petition for decreasing the use of disposable utensils.
- **"Etgirim" (Hebrew for "challenges"):** A bike club for people with physical disabilities. This group is located near the school, and they are also frequently using the small park near the school for picnicking. The students noticed they regularly use a lot of plastic dishes. Therefore, this group was also considered as "users" in this project. They worked with the students on several occasions along the project, in a similar way to the scouts group.
- **Regional cities association:** This association has certain responsibilities regarding environmental issues in the region. During the project its representatives were in contact with the school teachers, and they also participated in the Make-athon event with the students.
- **Ministry of Environmental Protection:** Representatives gave two lectures to the students in relevant issues: the use of plastic tableware and the connection to environmental pollution in general.
- **Municipality:** The schools worked closely with the Mayor and several departments of the municipality. The Mayor published an article in the local media relating to the problem of extended use of plastic tableware, and wanted to connect with the school for this purpose. He created a campaign throughout the city. He also published in his Facebook channel the survey that was developed by the students, thus highly increasing its reach and impact. Finally, the Mayor publically signed a petition to decrease the use of disposable utensils.  
**Sanitation Department in the Municipality** Is intended to help the students during the experimentation phase, by making the arrangements for placing a dish-washing stand in the park, as well as campaign stickers on outdoor furniture.  
**Representative from the Education Department in the Municipality** (the head of the Department and his deputy), who are responsible for informal education and youth groups in the city, took part in the Make-athon event in school and collaborated with the students.
- **Academy:** The school collaborated with a university professor who initiated a project regarding garbage disposal (In general). The students had a lecture on pollution and environmental damages of plastic.



### 3. Prototype developed (include images):

The students initiated a campaign throughout the city, with the support of the Mayor.



They signed different community stakeholders to a petition for committing to reduce the use of disposable dishes in the city.



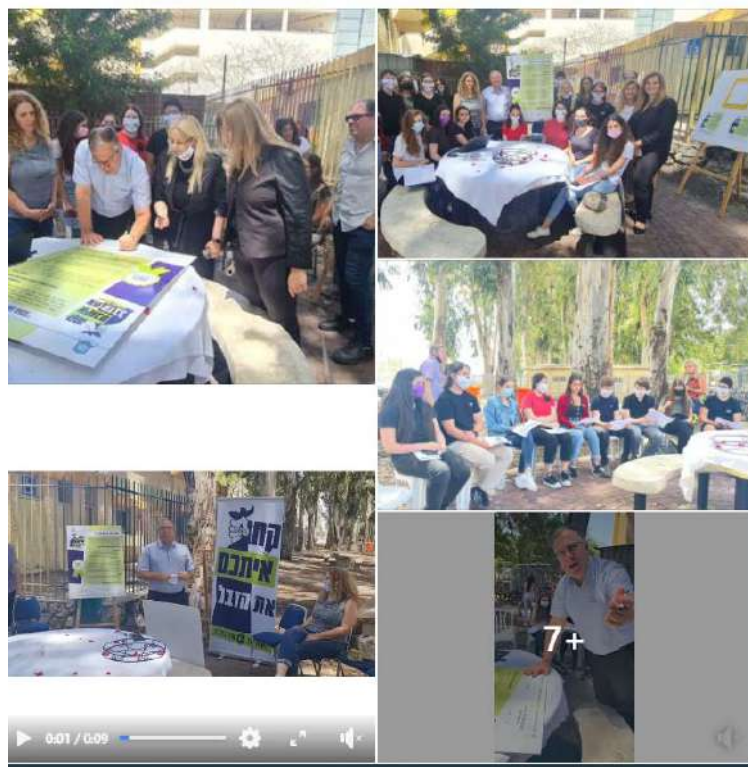
The campaign included giving away facemasks with the logo and slogan, publication in the social media (the school and mayor's accounts), and an article in the local newspaper.





אורט דפנה נמצאת עם Tubul Kabessa Raya ו-4 מוספים  
6 במאי ב-21:32

קחו אתכם את החבל! מיזם חשוב וייחודי בשיתוף ראש העיר אלי דוקורסקי וקבוצת מנהיגות בדפנה.



[id=100001256741022&https://m.facebook.com/story.php?story\\_fbid=4197968643588319](https://m.facebook.com/story.php?story_fbid=4197968643588319&id=100001256741022)

#### **4. Other relevant information**

The teacher wants to continue this project this year (2<sup>nd</sup> year of the SALL project). The plan is to expand the campaign and post stickers and signs on the eating tables located in the open area near the school – with the support of the Mayor. Another important step would be to place a public dishwasher stand so that people can clean their reusable dishes when they go outdoors.

## **FEEDBACK FROM PARTICIPANTS**

### **Teachers**

The leading teacher said that she learned a lot during this project. According to her, this topic was not something she dealt with before with her students and didn't have deep background, but still she wanted to focus on it.

### **Students**

The students said that they are now more ashamed to use plastic tableware in their daily lives, and the same for their families in their homes. This is also the case in the teachers' lounge at school - they replaced the disposable utensils (mostly paper and plastic cups) with reusable dishes, in order to raise awareness to this issue. In one school trip they used only reusable dishes - something that never happened before the project.

### **Societal actors**

The teachers were surprised that many stakeholders agreed to collaborate with them. There was a very good response from the Mayor and the Municipality, as the project subject was highly relevant to the new approach that the city wanted to promote regarding environmental issues. The municipality supports this living-lab project and defines this environmental challenge as one of the issues to be dealt by the city. Also, the Scouts group agreed immediately to participate in the project and contribute in finding possible solutions.

The Scouts representatives told the teachers that they were very connected with the subject, and that they will act as change agents and start encouraging the kids to bring reusable dishes to their outdoors activities. A great value from this project was to the Mayor and the Municipality, who took this opportunity to leverage the city approach to environment and start promoting it with school students.

# SALL exemplary school-project

## BASIC DATA

Project title:	Sustainable and healthy food
School name:	Christelijk Lyceum Veenendaal
Country:	The Netherlands
Number and age of students in the project:	19 students, ages between 14 and 16 years old
Number and profile[1] of teachers involved:	Five teachers, in the subjects Physical Education (2), Mathematics and Economics (2). One teacher is the Coordinator of the Economics & Social Business stream.
Subjects and topics addressed in the project	Health, sustainability, food, catering business
URL in the platform:	<a href="https://www.schoolofthefuture.eu/nl/school/christelijk-lyceum-veenendaal">https://www.schoolofthefuture.eu/nl/school/christelijk-lyceum-veenendaal</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

The CLV is Christian school community. However, they emphasize that all students are welcome, regardless of their philosophy, because society also consists of different cultural and philosophical movements.

Students are given the space to develop in a safe environment in which there is great involvement with each other. The school wants to keep up with the (digital) time and continue to develop in digital support. Together with the students, they look for what suits them and they are stimulated to develop their talent and creativity.

Currently, the school is transitioning toward more project driven way of teaching in the upper classes, which what they are using the SALL principles for. This is the first time this school has collaborated with NEMO Science Museum in such a project.

## THE SCHOOL IN THE PROJECT

CLV was one of the focus schools in the SALL project for the Netherlands. A call was sent out to schools via the NEMO newsletter, the NEMO website, social media and mailing lists with schools interested in NEMO projects to sign up for an information webinar about SALL. Our contact person for CLV, participated in this webinar and decided to sign up for SALL.

# SALL METHODOLOGY

## 1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

The project was set up by the teachers involved, who also chose the real problems that the students would be addressing. The students were divided in groups of 3-4 and each worked on a different problem.

Group 1 was asked to advise their stakeholder on sustainable packaging.

Group 2 and 3 were asked to advise their stakeholder on how to transform their menu into a healthy menu.

Group 4 and 5 were asked to investigate sustainable packaging from now and the past by themselves, for instance by looking at what is currently done in that area in local shops.

## 2. Stakeholders involved (name and profile, how and when they have participated, etc.):

Name	Description
deMaes catering	Local catering business
CLV catering	School's canteen
SKF kantine	Local sports club canteen
vv Veenendaal kantine	Local football club canteen
Jumbo supermarkt	Chain supermarket franchiseholder
Catering 't Noorden	Local catering business
Bareneveld verpakkingen en disposables	Company that produces (sustainable) packaging and disposables
Snackbar (name unknown)	Local establishment that serves fried snacks

## 3. Prototype developed (include images):

The project lasted three full days, spread out over several weeks.

On the first day, the students:

- Listened to presentations from the catering businesses where they learned about working in catering and sustainable food;
- Worked on defining the specific issue to be worked on during the project;
- Prepared interview questions for their interview with other stakeholders (either ones that were provided by the school or ones the students came into contact with independently);
- Conducted their interviews and recorded the data arising from these interviews.

On the second day, the students:

- Processed the information they gathered from the Stakeholders during day one using the 'starbursting' method, and pitched their information to one of their teachers;
- Brainstormed about making a healthy lunch;
- Listened to a talk from a Jumbo employee about healthy products available on the supermarket;
- Prepared a healthy and sustainable lunch in groups for another group.



On the third day, the students:

- Prepared questions about sustainable packaging;
- Received a talk about sustainable packaging by a representative of Bareneveld verpakkingen en disposables;
- Brainstormed ideas for sustainable packaging;
- Prepared and held a presentation about their ideas;



# FEEDBACK FROM PARTICIPANTS

## Teachers

This is the first time the teachers set up and were involved in such a project. They indicated they really enjoyed working with the stakeholders.

## School leaders

The school leaders CLV are very enthusiastic about SALL and what it can bring to their school. This is exemplified by the fact that they are allowing SALL to continue in this new school year, and have allocated a lot of hours that can be spent on development on this project to the teachers involved. The coordinator of the Economics and Social Business stream is leading the development of the project, and is planning to get the entire school involved.

## Students

Students, especially those that were able to connect with an SA of their own choosing, indicated this motivated them more to work on school than usually.

## Societal actors

Some societal actors indicated they enjoyed working with the students, and said they were inspired by them. Especially one of the SAs that was approached by the students themselves, was happy to get to know these students in a different way than merely as customers in their snackbar.

# SALL exemplary school-project

## BASIC DATA

Project title:	Evaluating food packages used by food production companies
School name:	The Junior & Senior School
Country:	Cyprus
Number and age of students in the project:	7 students / 12-13 years old
Number and profile[1] of teachers involved:	1 Physics teacher
Subjects and topics addressed in the project	The school was interested in searching, identifying and evaluating food packages used by food production companies in Cyprus.
URL in the platform:	<a href="https://www.schoolsaslivinglabs.eu/project/the-junior-senior-school/">https://www.schoolsaslivinglabs.eu/project/the-junior-senior-school/</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

The Junior & Senior School is a private English school. It is located very close to the city centre and it is situated in a busy area surrounded by several businesses and organisations. The students involved in the project are a group of seven students that are incredibly eager and motivated. Their teacher was familiar in advance with the implementation of school projects but not with the SALL methodology or the concept of the food system. The teacher and students spent time studying ideas and concepts connected to the food system and identifying prospective collaborators in their local community.

## THE SCHOOL IN THE PROJECT

The teacher who coordinated the project firstly participated in the SALL workshop organized by the National Coordinator (University of Cyprus) during which an initial discussion regarding the project the school could undertake took place. The teacher was familiar in advance with the implementation of school projects (mainly related to STEM education or environmental education) but not with the LL methodology or the concept of the food system. Hence, support was requested from the National Coordinator in regards to the planning process of their project and materials that can be disseminated among students for informing and engaging them in a LL. The teacher and students also devoted some time in order to study concepts related to the food system, as well as to identify potential collaborators in their local community.

# SALL METHODOLOGY

## 1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

The school was interested in searching, identifying and evaluating food packages used by food production companies in Cyprus. The school investigated the type of packages that are used by local producers and how to promote eco-friendly packaging to producers and consumers with the support of societal actors (e.g., researchers, recycling companies, NGOs, parents). Based on the organization who is in charge for the recycling here in Cyprus, approximately 40% of the materials that people put in recycling bins cannot be recycled. Their end goal is to create a service that will clearly indicate if a product is recyclable in Cyprus, before the customer purchases it. In this way, they will promote recyclable products / companies and at the same time this initiative will impact on improving the quality of recycling.

## 2. Stakeholders involved (name and profile, how and when they have participated, etc.):

1. The Research in Science and Technology Education Group (ReSciTEG) facilitated the communication between an organization responsible for packaging waste (i.e. Green Dot Cyprus) and the school. Furthermore, the group provided information regarding other organisations who could serve as societal actors as well as their knowledge and expertise in research methods and best practices for implementing a living lab project in the context of food system in order to support the school in creating and sustaining a Living Lab. This collaboration was on-going throughout the project [co-construction level].

2. Green Dot Cyprus provided expertise and feedback related to the project by providing information material, suggesting other societal actors that they can collaborate with, and answering different questions of the students during different stages of their project

e.g.,

What % of households recycle?



Which of the above types of plastics do you accept?

What happens to the partially recyclable objects (egg packet with sticker) do you separate them manually? The previously mentioned collaboration was done through email exchanges with the teacher, the NC and a representative of Green Dot. An online meeting with all the participants of the school's Living Lab took place during which the students pitched their ideas, asked questions and planned future collaborations with the organization and other potential societal actors.

## 3. Prototype developed (include images):



### Identifying a problem - conceptualizing their goal

At the initial stages of the planning process, the teacher informed the school and disseminated the SALL project in her different classes. After this dissemination, a group of ten students declared interest. The group decided to organize weekly meetings for planning and implementing their project. The Initial meetings were focused on brainstorming different ideas and problems/issues that concerned the students as well as their local community in regards to the food system theme. In addition, different societal actors that could potentially be involved in the project were identified and different ways in which they could be approached were discussed. In one of these meetings, a member of the National Coordination team participated in order to facilitate the brainstorming process and provide support during the planning of the next steps.



*Pictures 1 & 2: Students brainstorm ideas and design their logo*



*Picture 3: Researching companies and products with eco-friendly packaging*

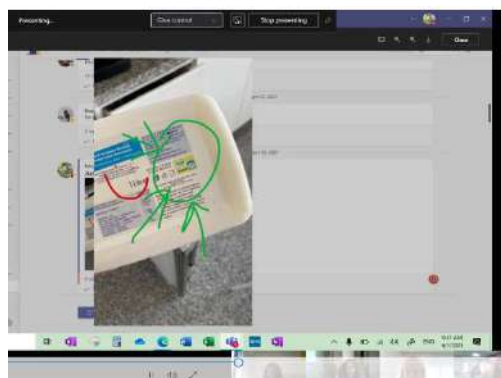


*Picture 4: The students of the Living Lab*

### **Implementation - establishing collaborations & creating a prototype (service)**

After deciding on their aim, students designed their Living Lab logo and created a list of societal actors that they can approach for supporting them in different ways during the project. This list included companies that design and sell eco-friendly packages, companies responsible for recycling, supermarkets in the area and social media channels that promote eco-friendly products in Cyprus. The students decided to firstly focus on creating a collaboration with Green-dot and they formulated different questions to pose to them for clarifying some issues that were not able to fully comprehend during their initial research (e.g. what types of plastic are not recyclable in Cyprus?).

After an initial discussion with the organization through emails, an online meeting was organized for students to pitch their ideas to Green Dot. During the meeting, they also received information and feedback from Green Dot, which helped them to better define their actions. Green Dot forwarded informational material to students about the recycling symbols displayed on packaging and the obligation of organizations for recovering and recycling their packaging (percentage targets per material: plastics, wood, ferrous metals, aluminum, glass, paper and cardboard). Green Dot also proposed some other potential societal actors that they collaborate with that could be involved in the project, like ENERGO (responsible for handling non-economically recyclable material to be used as raw materials in industries), Green Points (responsible for the disposal of household waste) and the Department of Environment of the Lanitis industry (one of the largest business groups in Cyprus).



*Pictures 5 & 6: Students pitching their project to a Green Dot representative*

The school also made some steps in creating a prototype service for supermarkets (i.e. an awarding system for consumers) in order to raise consumer's awareness about whether the products they buy are friendly to the environment and can be recycled. Specifically, they suggested to create badges that can be placed on shelves under products which Green Dot can recycle or that use eco-friendly packaging. When buying these products, the consumer can be awarded with points in the already established loyalty plan

of the supermarket. This service intrigued the representative of Green Dot who is planning to present it to the company's board.

## FEEDBACK FROM PARTICIPANTS

### Students

The students that formed this Living Lab were overly excited to participate and had an active role in the process. They were eager to form their group, plan the different actions and they were very excited to pitch their ideas to big companies. One of the main points raised by these students was that they were passionate to make this work and to convince adults that their project has great potential. During their meetings, they formulated different arguments and ways to convince a variety of societal actors and to also inform others (especially their peers). They initially lacked some confidence since they felt they were too young to be listened or for big companies (and adults) to seriously take them into consideration but as their project progressed, they felt that, with support, they can be agents of change in their community. As one of the students stated during their presentation in the SALL conference (beginning of June): *"From the Living Lab Experience, we are gaining a plethora of skills, such as working as a team, designing, tech skills, etc. We have learnt that we must come together and collaborate as a team to make Cyprus green again. As the new generation, we feel responsible to bring back the good in the world, restore its natural beauties and create an everlasting impact".*

# SALL exemplary school-project

## BASIC DATA

Project title:	Raise awareness concerning environmental problems
School name:	The International School of Paphos (secondary)
Country:	Cyprus
Number and age of students in the project:	approximately 12 students / ages: 12-19 <i>It is noted that most of the students of the school helped organize or participated in some of challenges designed during the project</i>
Number and profile[1] of teachers involved:	1 Science teacher (also the coordinator of eco-school initiatives)
Subjects and topics addressed in the project	The school's overall goal was to raise awareness concerning key environmental problems (e.g., plastic pollution, food wastage) and promote collaborative work for these issues by involving the local community.
URL in the platform:	<a href="https://www.schoolofthefuture.eu/en/school/international-school-paphos">https://www.schoolofthefuture.eu/en/school/international-school-paphos</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.

The International School of Paphos is a private English school which was founded in 1987 as a co-educational day and boarding school, located on the outskirts of Paphos. The school's overall mission is to promote a well-rounded education in partnership with families and the wider community, to create an inspirational environment in which equal opportunities empower students to achieve their personal best, and to enable their pupils to become critical, independent thinkers who embrace lifelong learning and make their mark as global citizens. Thus, the SALL methodology was in line with their values and vision. The students that participated in the project were extremely cooperative, engaged, and motivated to raise awareness concerning important environmental issues (e.g., plastic pollution, food waste) and to encourage collaborative work on these issues through the involvement of the local community.

## THE SCHOOL IN THE PROJECT

A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).

The teacher who coordinated the project firstly participated in the SALL workshop organized by the National Coordinator (University of Cyprus) during which an initial discussion regarding the project the school could undertake took place. The teacher and the school in general were familiar with the implementation of environmental projects since their school is involved in the eco-schools initiative (i.e. a school that implements different actions related to environmental issues). However, it was their first time to be introduced to the LL approach. The school had already some plans for actions related to the food system that they decided they will re-approach through the LL methodology. Support was requested from the National Coordinator in regards on how to enhance their ideas with key aspects of the LL methodology.

## SALL METHODOLOGY

1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

The school's overall goal was to raise awareness concerning key environmental problems (e.g. plastic pollution, food wastage) and promote collaborative work for these issues by involving the local community. Hence, the school organized an eco-challenge month during which challenges/actions related to different environmental problems took place in the school and the local community in collaboration with different societal actors (e.g. parents, the town hall, artists, sponsors). This project involved all 850 students of the school, from reception to year 13. For a month, the students worked in cooperation with their teachers, their families and the local community on the implementation of different actions like tree-planting, construction of a metal turtle functioning as a recycling bin, development of a mobile application to minimize food wastage, tasting of fruits and vegetables, sale of ecological products and donation of their garden's products to families in need.

2. Stakeholders involved (name and profile, how and when they have participated, etc.):

1. Sponsors: To achieve their goal of raising awareness concerning environmental problems through different actions, students decided to contact companies that are in the local area of the school to sponsor them with money or different products. The sponsors they managed to find were:

- Milrose Patisserie: Donated sweets to raise money for the metal turtle and sponsored a tree.
- Amaryllis Petinou Pharmacy: Donated products that are eco-friendly to raise money for the metal turtle and sponsored a tree.
- Allion Vegetable & Fruits Co Ltd: Donated individually packed fruit and vegetables for tasting for the students.
- JK Garden Maintenance services: Offered guidance to the students for how to look after plants and helped them to transform their school to a greener space.
- Pan Motors - Luxury used cars
- Parents and Teachers Association of the school: Sponsored 5 fruit trees for the school garden and soil for every child to have his/her own pot with a plant to take care of at home.

2. Artist: The students came in contact with an artist for helping them create the metal construction that will function as recycling bin in their community. They discussed about the shape of the metal construction and after deciding on the details the artist created a metal construction in the shape of a turtle.

3. Town hall: The students discussed with the town hall about the location where they could place the turtle construction for recycling plastic bottles. They decided to place it in the school yard to be used by the students. They are also planning to cooperate next school year with the town hall for placing similar constructions for recycling purposes in other areas of their city as well.



4. Parents: Students' parents were invited to the different events of the eco-challenge month to promote the spirit of environmental awareness to the wider community. For example, science teachers invited the Parents Teachers Association to visit the school garden where they could see the trees, flowers, herbs and vegetables planted, the pond built and a collection of Cypriot stones.

Moreover, parents were informed through social media (school's facebook page) about the different actions that took place throughout the eco-challenge month. You can see some examples of posts here:

<https://www.facebook.com/ISOPofficialPTA/posts/262716722208843> ,  
<https://www.facebook.com/ISOPofficialPTA/posts/267884948358687>



Visit of Parents and Teachers Association to the school garden

5. Research in Science and Technology Education Group (ReSciTEG) [co-construction level]: The teacher requested support from the National Coordinator in regards on how to enhance their ideas with key aspects of the LL methodology. The Cypriot NCs provided their knowledge and expertise by suggesting good practices for implementing a LL project and mainly on how to engage societal actors and create a prototype.

### 3. Prototype developed (include images):

#### **Identifying a problem - conceptualizing their goal**

At the initial stages of the planning process, the teacher informed the principal of the school about the SALL project. Together they discussed ways in which they can include the LL methodology in their already planned actions that were related to the food system. Then, they requested support from the National Coordinator in regards on how to enhance their ideas with key aspects of the LL methodology. The National Coordinator supported them on how to engage different societal and on how to proceed with the prototyping process. The school set the overall goal for this school year to raise awareness concerning environmental problems (e.g. plastic pollution, food waste) and to promote collaborative work for issues concerning the local community. They wanted to engage all 850 students of the school in some way from reception to year 13. Hence, they decided that the best way to achieve maximum engagement would be to create an eco-challenge month during which students could design and participate in different actions that would take place each day. Finally, the teacher introduced the overall aim for this school year to the students and also presented the SALL project to them.

#### **Implementation - establishing collaborations**

After deciding on their aim, all the school community suggested ideas for different eco-challenges/actions to take place in the school community for a month. Their planning is presented in the picture below:

Date/day	Challenge/title What it's about	Image	Monday 12 <sup>th</sup>	Reuse We're sure you have heard this word before, but if not, to reuse means to use again. For example, if we have some old clothes that we don't use, we can give them to charity, so someone can use them again. Or, instead of plastic cups/bottles, we can buy one (maybe with a pretty design) and refill it!	
Saturday 27 <sup>th</sup> March	Earth Hour 20:30 – 21:30 Takes place every year to highlight the problems our planet is facing. All lights are switched off and we turn off electricity for 1 hour. This year it is different, earthhour.org ask that you spotlight our planet by sharing a video from their website on your social media highlighting the issues the planet is facing.		Tuesday 13 <sup>th</sup>	Measure your carbon footprint (by footprint and age) or another one. Your carbon footprint is an estimate of how much you impact on the planet. It is a measure of your lifestyle, your travelling, your shopping etc. so the world can afford to support you.	
Sunday 28 <sup>th</sup> March	Don't use your car today. Most people are aware of the effects of the carbon dioxide emissions that contribute to climate change. Do you know that cars are responsible for air, water and soil pollution? They affect human health and can make asthma worse in many. So ditch the car for a day and see if you can walk, bike or use public transport instead.		Wednesday 14 <sup>th</sup>	Clean the school area #pollutionpatrolcy If we all believe then we can make a difference. Pick up some litter, if everyone does then who knows how much cleaner and better the environment will be. #pollutionpatrolcy is a group who try to make a difference. Lets join them to make a bigger difference.	
Monday 29 <sup>th</sup> March	Start your recycling competition entry. We challenge you to think of a new way of using a plastic water bottle (or many). There are so many in Cyprus and in our school so how can we reuse them? Choose any size bottle, give it a new use and let us know via Teams, email or bring it in to school. Make sure we have your name and form group too.		Thursday 15 <sup>th</sup>	Eco sale in school, join us in buying Eco-friendly products to help reduce and reuse things. Fair trade chocolate (Fairtrade changes trade for better prices, decent working conditions and a fairer deal for farmers and workers), olive oil soap, plants, herbs, reusable bags.	
Tuesday 30 <sup>th</sup> March	Reduce your water consumption (not how much you drink!) Although 71% of the planet is water, only 0.3% is drinkable. There is a shortage of this water and most of it is used in agriculture and then for generating electricity. Water stress is when a country, like Cyprus, uses more water at some times than it collects. Try taking a shorter shower, or re-using the water you wash up in to water a plant!		Friday 16 <sup>th</sup>	Why should we reduce our carbon dioxide pollution presentation by Andreas Tsangas	
Wednesday 31 <sup>st</sup> March	Eat fruit for a day – Many of the fruits we eat come from trees and so by increasing our fruit intake and demand we will push for more trees to be planted. There are many other impacts on increasing our fruit intake and decreasing our meat consumption, all good for the environment. In Cyprus we are lucky to have a wide variety of seasonal fruits available. let's try them!		Saturday 17 <sup>th</sup>	Buy locally sourced products, including food. Transportation of goods is one of the biggest contributors to air pollution, including acid rain. The more we can buy locally the less impact there is on the environment.	
			Sunday 18 <sup>th</sup>	Make a compost bin food waste should be minimised (on average 30% of food is wasted) to reduce your consumption, but some waste is going to happen. Make a compost bin (https://www.diyprojects.com/33618/home/gardening/35-cheap-easy-diy-compost-bins-can-build-weekend ) to allow this to breakdown so you have better soil for your garden.	
			Monday 19 <sup>th</sup>	Recycle, bring your old oil to school, waste cooking oil contaminates water ways. It can be used as fuel for trucks and cars (don't put it in your car unless it has been converted). Bring your oil to school on	

## Eco-challenges Ideas

Thereafter, different societal actors that could potentially be involved in the project and the different ways through which they could support their endeavour were identified. Their initial goal was to find actors in their local community that could sponsor some their actions with money or products. They also approach the town hall and an artist for supporting the creation of a recycling bin in the area. They also decided to involve the parents by frequently disseminating the eco-challenges and related information for related environmental issues through social media and invitations for participating in some of the eco-challenges.

### Implementation - creating a prototype (service)

The eco-challenge month took place from 27th of March till 28th of April. During this month the teachers, the students, and their families worked together on the implementation of the following activities:

- They introduced the recycling turtle called Kosmas during Earth hour (27th of March), to mark the start of the eco-challenge month. The turtle was placed inside the school area to encourage students to throw their plastic waste in there for recycling purposes. The school raised money for the construction of the turtle from different sponsors and an artist constructed the bin (see picture below).



The recycling bin (Turtle Kosmas) placed in the school yard

- They launched the app "Quick Mealz", which is ready to be downloaded, the main purpose of which is to minimise food waste.



The first page of the Quick Mealz app

- They created a small green area near their school (in order to involve their community more) and installed a water system. During the creation process different sponsors provided plants or money and people from the community helped. The trees that were planted are mainly orange and lemon trees. Their plan is to donate their produce to people in need. The opportunity was provided to students to plant vegetables, trees, and flowers in the green area and also, they took a plant home. JK Garden Maintenance services offered guidance to the students on how to look after their plants and helped them to transform their school to a greener space. In addition, the Parents and Teachers Association visited the school garden after its transformation.



Transformation of the school garden

- They hosted a tasting of fruits and vegetables for students which were sponsored by Alion Vegetable & Fruits Co Ltd.



Eco-friendly lunch box with fruits and vegetables

- They had an eco-sale with herbs from their garden, tea made from these herbs, metal straws and re-usable shopping bags.



Eco-sale

#### 4. Other relevant information

## FEEDBACK FROM PARTICIPANTS

Testimonies, images, overall feedback.



## Teachers

The LL project helped in supporting all the different personalities, goals, and needs of the students. Students were given the opportunity to make their own choices for the project and in that way, they increased intrinsic motivation, and put in more effort to design and implement all these actions—an ideal recipe for better learning outcomes.

## School leaders

## Students

## Societal actors

# SALL exemplary school-project

## BASIC DATA

Project title:	School Garden
School name:	Muraste school
Country:	Estonia
Number and age of students in the project:	24 students, 11-12 years old (later all school was involved)
Number and profile[1] of teachers involved:	2 teachers: 1 language and literature teacher, science teacher.
Subjects and topics addressed in the project	Sustainability, growing own food, learning outdoors
URL in the platform:	

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

Muraste School is an medium size elementary school in Harku municipality. Considering its location, Muraste School's educational activities place special emphasis on the surrounding physical, mental and socio-cultural environment, its value, preservation and ensuring its sustainable development. Muraste school also focuses on understanding and preserve the natural environment and encourages students to feel themselves as a part of that environment. Muraste school considers it important to use the nature and school surroundings as a learning environment.

## THE SCHOOL IN THE PROJECT

The school had no connection with AHHA (NC), we found them when we started searching schools that valued community and teamwork. School values seemed to be very in line with SALL approach. So, we contacted them and asked them to join the project. The school liked the idea of SALL methodology and the topic of food, because it really connected with their values and methods of teaching.

# SALL METHODOLOGY

## **1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

The aim of the project further developing and rebuilding the school yard and creating more possibilities (and activities) to learn outdoors.

The alternatives were different types and layouts of the planting boxes.

Living Lab project in Muraste School started similarly with the other pilot school (Gaia, since they started a bit later and could use the experiences of the other school). Setting up a Living Lab in Gaia School started with an introduction the overall idea, stages and steps of the SALL project from the NC. The project was introduced via Zoom call, e-mails and call for schools document.

Muraste School also started with recruiting the classrooms that were the most interested in the project and the theme and after that identified during which lessons they can work on their Living Lab project. When classroom that showed the most interest was selected, a student questionnaire was filled in and also a call for parents to take part was sent out.

The practical work started with introducing the topic of food and students started listing various problems and challenges related to the topic. Also finding connections with the topic and their own school.

As a result, new planting boxes were built in the school yard (in the beginning of summer 2021) and work with them included assembling, filling with soil and planting. During the summer, students and parents worked in school garden the planting boxes (e.g. watering).

In the autumn several lessons were directly linked to the planting boxes - several classes had their lessons outside. In maths students measured the boxes and calculated the volume of the soil and measured the length of sunflowers. In geography flower bulbs were planted and different soil types were studied. In history the history and structure of tulips was studied. In arts paintings of tulips were made and put up as an exhibition. Mobile apps were used to define various plans in the garden and some crops were also harvested.

## **2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

Muraste School's living laboratory core team had a total of two teachers, two members from administration, three parents and one classroom of students who worked in the project from the beginning (the problem/idea to the end - the realisation of the project). Students and parents worked on the co-construction level and teachers along with the school administrative members worked on co-governance level.

One worker of the school's maintenance team and one parent and involved in the activities (reconstruction works in the garden) during the later stages of the project. They can be considered Involved In the testing level.

A company that helped out with the soil for the planting boxes was also involved. They can be considered involved in sharing level.

### 3. Prototype developed (include images):

Prototype can be considered the planting boxes.



## FEEDBACK FROM PARTICIPANTS

School (teachers, students and board) was very happy to work on their projects and they loved the outcome. Also, the parents involved gave positive feedback and were happy that they had the opportunity to take part. School is interested on continuing to develop their garden and create new activities that can be directly linked with the school garden. New Living Lab project ideas will also be initiated.

# SALL exemplary school-project

## BASIC DATA

Project title:	Composting food waste
School name:	Gaia School
Country:	Estonia
Number and age of students in the project:	15 students, 12-13 years old
Number and profile[1] of teachers involved:	3 teachers: 1 crafts teacher (also school event manager), 1 history teacher, 1 science teacher
Subjects and topics addressed in the project	Sustainability, food waste
URL in the platform:	

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

Gaia School is a private small community school, situated in Tallinn (capital of Estonia). Gaia school follows the principles of Gaia Education (<http://gaia.org/gaia-education>) that promotes sustainable lifestyle, caring about the Earth and well-being of the human being. Their curriculum has an emphasis on nature studies and national heritage, it supports integrated lessons and teachers' cooperation. Gaia School is a community school, parents are actively participating in teaching-learning process, especially during project weeks. Gaia School promotes outdoor learning and learning through practical activities - one weekday is a project day for all classes and it is usually spent outside of the school. School has a lot of experience with different projects (local and International) and Project Based Learning as well as Inquiry Based Learning are essential in their curricula.

## THE SCHOOL IN THE PROJECT

The school had no connection with AHHA (NC), we found them when we started searching schools that valued community and teamwork. School values seemed to be very in line with SALL approach. So, we contacted them and asked them to join the project. The school liked the idea of SALL methodology and the topic of food, because it really connected with their values and methods of teaching.

# SALL METHODOLOGY

## **1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

The aim of the Composting project was to reduce food waste in school (and indirectly in student's homes as well) and find a better way to dispose the food waste.

The alternatives were to build a composter themselves. Since using the bokashi composters allowed students to measure and do experiments for school work as well, they chose this option.

During the Composting project students got an introduction to the Bokashi composting method (composting technique that turns food scraps into living soil, easily and without foul smell) and they piloted composting project.

Also, an expert visited the school and talked about food waste, why it is a problem and how to reduce food waste.

The school started composting their food waste and used the composted soil/fertilizer in the school garden. Composting project is also still ongoing and the school is considering collecting and composting food waste at school on a bigger scale.

## **2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

The Gaia School's living lab's core team had a total of three teachers, two members from administration, two parents and two sets of classrooms that worked on the project from the beginning (the problem/idea to the end - the realisation of the project). Students and parents worked on the co-construction level and teachers along with the school administrative members worked on co-governance level.

One researcher was also involved in the process of getting to know the food system and food waste theme in more detail (during a lecture). She can be considered as sharing level member.

Also, two workers from the school cafeteria were also involved in the activities (in the Composting project) during the later stages of the project. They can be considered Involved In the testing level, when students started collecting the food waste from the cafeteria.

A company called Biolan gave school the Bokashi composter.

## **3. Prototype developed (include images):**

Prototype can be considered the composter and the activities they did involving the composter.

**MEISTER-KOMPOSTER GAIA KOOLIS  
SEPTEMBRIS 2021**

KURVALT KÕÕGINURGAS SEISNUD JA HILJEM  
ÕUE KOMPOSTIKASTI VIIDUD TOIDUJÄÄTMED  
SAAVAD NÜÜD NAUTIDA SOOTUKS UUT  
VÕIMALUST - BIOLANI BOKASHI KOMPOSTER  
VÕTAB NAD ENDASSE, KÄÄRITAB NEIST UUT  
MULDA JA ANNAB TAIMEDELE VÄETISEKS  
SOBILIKKU VEDELIKKU.

GAIA KOOLI 7. KLASSI  
ÕPILASED  
HOOLITSEVAD SELLE  
EEST, ET  
TOIDUJÄÄTMED  
KENASTI  
KOMPOSTRISSE  
JÕUAKSID. PÄRAST  
PAARINÄDALAST  
KÄÄRIMIST RÄNDAB  
SEGU SUUREMASSE  
KOMPOSTRISSE.



LISAKS TEEVAD  
LAPSED KODUNDUSE  
TUNNIS  
FERMENTEERIMISEGA  
TUTVUST JA VALMIB  
MAITSEV  
HAPUKAPSAS!



Video:

<https://www.dropbox.com/s/zefsbp1ky01dqkl/Composting%20in%20Gaia%20School.mp4?dl=0>

Older students were teaching younger ones how to compost.

## FEEDBACK FROM PARTICIPANTS

The school has reported that the projects were very successful and students and parents were very invested. The situation was a bit hard at the beginning due to the lockdowns, but in the end of the schoolyear students were able to meet again and the work continued with a faster pace. After piloting food composting with one composter school has now got more of the composters to different classrooms as well and now the whole school is collecting food waste and turning them into soil.

# SALL exemplary school-project

## BASIC DATA

Project title:	WonderLab
School name:	OŠ "Petar Kočić"
Country:	Serbia
Number and age of students in the project:	12 students, 10 of them are 8-9 years old, and 2 of them are 12-13 years old.
Number and profile[1] of teachers involved:	One class teacher - she has the main role in implementation of the project; one biology teacher was only a consultant; and a school pedagogue who was coordinating the project in their school.
Subjects and topics addressed in the project	Herbs, health, sustainable growing, tea production
URL in the platform:	<a href="https://www.schoolofthefuture.eu/en/school/primary-school-petar-kocic">https://www.schoolofthefuture.eu/en/school/primary-school-petar-kocic</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.

This school has a main big building in the town of Indija and a small satellite school in a village called Ljukovo. The SALL project was implemented in this small school with one class of 2nd graders and two older students from the main school. Motivation of all participants from this school was very high. School's garden is the main place of encounter for children and school staff, place for play, free time but also a place for learning, meaning that a lot of SALL activities also took place in this space. It illustrates the openness of this school and a flexible model of organizing educational processes. School garden is rich with artefacts created by students' parents and local entrepreneurs which also indicates strong connection of the school with the local community.

## THE SCHOOL IN THE PROJECT

This school was familiar to the people from the Center For the Promotion of Science from previous projects. That is why they were invited to join SALL as well, but at the first meeting with the headmistress (beginning of the 2021.) it was suggested that SALL should be implemented with their satellite school rather than with the main one because it was in the rural area and had a possibility of growing a school garden.



# SALL METHODOLOGY

## **1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

Main problem recognised in the workshop with children were:

1. food waste;
2. lack of knowledge among children about herbs;
3. and the fact that children spend less and less time outdoors.

## **2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

- Local grocery store chain Zam provided food waste but also food for participants in the workshops, together with the Restaurant called "Maria Patell".
- A doctor from the Public health institute organized a workshop about the health benefits of different herbs.
- Members from local NGO "Gorocvet" organized two workshops for creating embroidery packaging for the tea.

## **3. Prototype developed (include images):**

Teacher together with the school pedagogue, children and rest of the team developed a project action plan that included:

- creating a school garden of tea herbs;
- calendar to follow the time for planting and picking herbs;
- compost site for this garden (food waste is collected from a local grocery store chain, restaurant and children's homes);
- design of an open classroom with a drying machine (on solar heat) for the herbs,
- and an ecological tea package with illustrations and notes on health.

Main part of the project, an open classroom, was not yet built but the drying machine that will become part of it is ready.





## FEEDBACK FROM PARTICIPANTS

Teachers “These are not the same children as they were when we started the project. Now they are so used that people from the local community come to the classroom and they are so proud to show them around.”

School leaders “I am just too happy and proud for what we created here.”

Students “It is our garden. We have many plans for it.”

Societal actors “We are not sure how much children will be able to make on their own, but our task is to support them as much as we can.”

# SALL exemplary school-project

## BASIC DATA

Project title:	Challenge yourself for sustainability!
School name:	CED Pina Manique - Casa Pia
Country:	Portugal
Number and age of students in the project:	55 students, ages between 15 and 19 years-old
Number and profile <sup>[1]</sup> of teachers involved:	Six teachers, in the subjects of Biology (1) and Physical Education (5)
Subjects and topics addressed in the project	Food waste, healthy eating habits
URL in the platform:	<a href="https://www.schoolsaslivinglabs.eu/project/casa-pia/">https://www.schoolsaslivinglabs.eu/project/casa-pia/</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

*A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.*

Casa Pia mission is to integrate children and young people, namely those without an adequate family environment, guaranteeing them inclusive educational paths, based on prolonged education, quality vocational education and a commitment to professional integration.

This school (through other CED – Education and Development Centre) had already participated in other European projects linked to the open schooling approach, such as March - Make Science Real in Schools and OSOS - Open Schools for Open Societies. The teacher responsible for implementing the SALL project at school, has participated in the referred projects and has a great experience in engaging students in project-based learning programs.

## THE SCHOOL IN THE PROJECT

A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).

At the beginning of the SALL project, a call was made to schools that had a very successful participation in OSOS project, such as the present school. CED Pina Manique - Casa Pia, through teacher Margarida Zoccoli, was very interested in participate in the project, although this time the purpose was to engage new teachers, including Physical Education teachers.



In this way, CED Pina Manique - Casa Pia was one of the pilot schools in the SALL project from Portugal, (school year 2020/2021) and will continue to work in the project in this school year (2021/2022). In order to support all the pilot schools, Ciência Viva started SALL project with a webinar about living-lab methodology and a teacher-training short course about the sustainability of food systems.

## SALL METHODOLOGY

1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

At the beginning of the project, the teachers introduced the general theme of food systems to the students (c. 70) and the wide school community, through a World Café event, with the main title of “The importance of food for my health and for the health of the planet”. In this World Café each table had to discuss one of the following issues: animal rights; food seasonality; food advertising; methods of producing vegetables; food waste (before and after reaching the plate); food packaging and processed foods. The head master of the school was also present, actively participating in this World Café.





The school organized another event with the purpose of giving the stage to students (and other elements of school community) to discuss the findings from the previous World Café and to choose the problem(s) to be address and to be solved. The event took place in the National Day Against Obesity and featured a blind test competition on fruits and vegetables. After a debate, the students presented suggestions for topics that they would like to develop, in order to improve the school's food systems. The most voted projects were chosen: food in the school's cafeteria and bar; food waste before serving and food waste after serving. A large problem tree was drawn to explore the above problems, and afterwards students wrote the name and the class in the theme they prefer to work on.



The main objective of this SALL project, as designed by all intervenients, was to reduce food waste in the school canteen, both before and after the meals take place. Other goals are related with promoting healthy eating habits and increasing the fruit supply in school. These themes are closely linked to the daily lives of students.

2. Stakeholders involved (name and profile, how and when they have participated, etc.):

#### **Maria Granel**

Maria Granel, a chain store specialized in selling waste zero products and promoting waste zero living habits (through workshops, training, etc.), contributed with expertise and feedback related to the project, by providing information on decreasing food waste and replacing single-use packages for waste zero options.

#### **Gertal**

Gertal, the company that supplies food to the school canteen, contributed with expertise and feedback related to the project, by providing information on food transport and preparation, as well as on food waste management.

By the end of the pilot phase, other two other societal actors were involved: **Junta de Freguesia de Belém** (the local parish council) and **Re-Food** (a NGO dedicated to provide good rescued food to those who need it in the same communities where the food is rescued).

3. Prototype developed (include images):

Due to school restrictions linked to the pandemic, it was decided to start testing the solutions, by developing prototypes, during the present school year (2021/2022).

4. Other relevant information

## FEEDBACK FROM PARTICIPANTS

*Testimonies, images, overall feedback.*

### Teachers

Very gratifying to see the way in which the students adhered to this project and the activities developed. This project is considered very important in the development of students as an integral part of solving problems in the school community, as future individuals belonging to an active society and in contributing to the development of their skills.

### School leaders

Casa Pia considers the themes, methodologies and partnerships developed under the scope of SALL project, of utmost importance for the social inclusion of students, as well as the optimization of the teaching-learning process.

The school board considers this project very important and has been following it from the beginning, sometimes even in the dynamism of some activities during the project sessions.

## Students

They show a lot of interest in actively participating in the project, they are committed to the topics covered. They like the possibility that this project provides: the involvement of several classes, courses, teachers in the identification of problems in the School and possible solutions. They feel that they have a voice, an active participation in the improvement of different issues related to food systems/School. They are always asking when the next session is.

## Societal actors

They were very pleased with the themes that we proposed to develop and they adhered from the first contact. They consider these dynamics very important for the development of students as citizens.



# SALL exemplary school-project

## BASIC DATA

Project title:	Combate ao desperdício alimentar: refletir e agir
School name:	Escola Básica Pedro Jacques de Magalhães
Country:	Portugal
Number and age of students in the project:	37 students, ages between 12 and 15 years-old
Number and profile[1] of teachers involved:	Six teachers, in the subjects of Biology (1), Natural Sciences (1), Portuguese (1), English (2) and Visual Arts (1)
Subjects and topics addressed in the project	Food waste, food diet, eating habits
URL in the platform:	<a href="https://www.schoolsaslivinglabs.eu/project/escola-basica-pedro-jacques-de-magalhaes/">https://www.schoolsaslivinglabs.eu/project/escola-basica-pedro-jacques-de-magalhaes/</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

*A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.*

Located in Alverca and part of the municipality of Vila Franca de Xira, the school has around 1000 students aged between 10 and 15 years. Although this county is known for its natural and gastronomic heritage, where urbanism and rurality combine, students know less and less about the origin of what they eat, particularly about vegetables.

This school had already participated in other European projects linked to the open schooling approach, such as OSOS - Open Schools for Open Societies. The teacher responsible for implementing the project at school has already participated in OSOS, and has a great experience in engaging students in project-based learning programs. The participating teachers had some experience in developing school projects related with food systems, but did not have prior knowledge on living-lab methodologies.

## THE SCHOOL IN THE PROJECT

*A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).*

At the beginning of the SALL project, a call was made to schools that had a very successful participation in OSOS project, such as the present school. Escola Básica Pedro Jacques de Magalhães, through

teacher Adelaide Ferreira, was very interested in participate in the project, as they wanted to explore the theme of food systems in their school context.

In this way, Escola Básica Pedro Jacques de Magalhães was one of the pilot schools in the SALL project from Portugal, (school year 2020/2021) and will continue to work in the project in this school year (2021/2022). In order to support all the pilot schools, Ciência Viva started SALL project with a webinar about living-lab methodology and a teacher-training short course about the sustainability of food systems.

## SALL METHODOLOGY

1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

At the beginning of the project, the teachers introduced the theme of food systems, in particular the problem of food waste at school, to the students who attend the school's science club. Following this introduction, students decided to monitor the school canteen for a week, in order to identify any problems related with food waste.

Students identified the following problems in the one-week observation of school canteen: 89 kg of food (main dish) not consumed (from the plate to the waste), 51 kg of soup not consumed (from the plate to the waste), 8% of the meals not consumed (meals that were booked but students did not attend), no separation between organic waste and the other waste, only 20% of students consume fruit at lunch.

2. Stakeholders involved (name and profile, how and when they have participated, etc.):

### **Environmental Department, Vila Franca de Xira City Council**

A representative of the Environmental Department contributed with expertise and feedback related to the project, by providing information on managing food waste in school.

### **Educational Department, Vila Franca de Xira City Council**

A representative of the Educational Department contributed with expertise and feedback related to the project, by providing information on meals preparation and distribution in the school canteen, as well as efficient ways of booking meals in advance.

### **Parish Council of Alverca do Ribatejo e Sobralinho**

A representative of the local Parish Council contributed with expertise and feedback related to the project, by providing information on managing food waste in school.

### **Parents Association**

A representative of the Parents Association contributed with feedback related to the project, namely in what concerns the strategies to raise students' awareness to food waste.

Students organized a World Café with the presence of several societal actors, identified by teachers and students, that were linked to the problem of food waste: representatives of the school board, representatives of parents' association, representative of the City Council (Educational and Environmental Department) and of the local Parish. The project was discussed among all participants with the purpose of finding solutions for the identified problems.



### 3. Prototype developed (include images):

The following solutions were outlined by all the participants: to adjust the quantity of the food on the plate, to create a fruit take-away spot with the fruit that was not consumed during meals, to separate organic waste from other residues, and to raise awareness for the food waste problem among all school community, which included workshops on nutrition, organic waste management and composting. Within the identified solutions, it was also the development of a school garden and the creation of sustainable and healthy food recipes.

Due to school restrictions linked to the pandemic, it was decided that the solutions would be tested during the present school year (2021/2022).

### 4. Other relevant information

## FEEDBACK FROM PARTICIPANTS

*Testimonies, images, overall feedback.*

### Teachers

Teachers commented that the project fits in very well with the work being developed in the school's science club and it has been very motivating for the participating students. Moreover, teachers also commented that the project revealed a reality unknown to most of the school community, including teachers and school board, regarding the food waste in the school canteen.

Teacher: "It was possible to observe a significant improvement, as there was no longer any food waste, at the same time healthier eating habits were created".

Coordinator of the Mathematics and Experimental Sciences Department: "The project has proved to be very positive in the adoption of citizenship behaviours that are a valuable asset on a personal level but also on a social level. I would like to highlight the free distribution of fruit at the school bar, from what would be food waste in the school canteen, and the recycling of paper cutlery bags. The project has provided dynamic and common moments of reflection between the various partners to find solutions to the problems detected, as the World Café is an example".

### School leaders

President of the General Council of Pedro Jacques de Magalhães School Group: "The main virtue of a project of this nature is the involvement of students in all issues related to their life at school. Often, we speak exclusively of academic aspects related to formal learning outside the classroom. However, reflecting on what we eat at school, food waste and ways to reduce it, help to make future students more informed, responsible and committed citizens".

Deputy Director of Pedro Jacques de Magalhães School Group: “In the defense of environmental resources, this project allows our students to have an active intervention, with their families, in the fight against food waste and in the effective separation of waste. The study carried out in our cafeteria indicates worrying situations in the diet of our families, as it does not reveal that most of them encourage healthy habits. Likewise, waste separation was a topic addressed at the “World Café” and the conclusions reveal that the students involved in the SALL project have already developed, in their conscience, mechanisms for approaching colleagues and families in the sense of constituting themselves as great defenders of the environment and of this planet that is so ours... the Earth”.

Director of Pedro Jacques de Magalhães School Group: “At a time when environmental resources are starting to be scarce, it is necessary to raise the awareness of our students to defend them and educate families in the context of containing food waste and separating waste. This project allows the Educational Community to reflect on the eating habits of our students who reveal themselves as unhealthy due to the low consumption of soup, vegetables and salads. Through the “World Café” activity, strategies were defined to combat food waste and to educate our families in the effective separation of waste. We will continue with actions to raise awareness of families that are part of our Educational Community, in order to increase the fight against food waste, promote healthy eating and encourage the separation of waste”.

## Students

“The project greatly helped the school to waste less fruit. It motivated the students to, if they don't want to eat fruit, put it in the cafeteria box to be later available at the bar. I also think that vegan/vegetarian tasting showed students that vegan food tastes good”.

“The activity was well organized and monitored by the teachers, caught people's interest and was an interactive activity for the students”.

“I think it is important to monitor the cafeterias because it is a great responsibility to control the waste that is made today”.

“It is a project that is necessary, it has been very well implemented, it has made a difference and I think it has really changed mentalities. At least it changed mine”.

## Societal actors

President of the Parish Council: “It was a great privilege to participate in this living lab with young people very focused on problems and solutions. Best wishes for everyone!”

# SALL exemplary school-project

## BASIC DATA

Project title:	Garden Club
School name:	Lycée Hénaff
Country:	FRANCE
Number and age of students in the project:	30 students, aged 16-19 years old
Number and profile[1] of teachers involved:	<ul style="list-style-type: none"><li>• German teacher</li><li>• History and geography teacher</li><li>• Environmental health prevention teacher</li></ul>
Subjects and topics addressed in the project	Biology, graphic design, wood work, sustainable development,
URL in the platform:	<a href="https://www.lyceehenaff.fr/-Le-potager-">https://www.lyceehenaff.fr/-Le-potager-</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.

The school community has created a Garden Club where students and teachers, open to the external visits, meet twice a week to take care of the garden, create a seedbank to exchange with other stakeholders, produce vegetables to be cooked by the chef of the school canteen.

It acts as a living laboratory demonstrating that it's possible to create biodiversity inside the concrete courtyard of the school. It allows students from various career tracks to meet and to engage into food production, to create opportunities for the school community to meet outside the regular curriculum context of the teaching, to invite parents to discover a more welcoming space their children live in most of the year through the students who can stimulate a more welcoming and sustainable school environment, learn about food production cycles, how the living recreate itself through seeds etc.

This project was laureate of the regional "Green Hackaton challenge" in 2019 and got funding to buy for instance a watering station for the summer vacation when the garden needs watering and less people are around to take care of it.

# THE SCHOOL IN THE PROJECT

This school was approached after being recommended by the organisation in charge of promoting AMAP (Association for the preservation of farming agriculture) in the Ile de France region, as the teacher involved in the Garden Club is also involved in these grassroots movements.

We then made an appointment to present the project and convinced the teacher to get involved. Their Garden Club project had already started but was on hold due to the Covid 19 pandemic when they joined the SALL project.

## SALL METHODOLOGY

### **1. Real problem addressed (i.e., how and who chose the problem, which other alternatives were discussed, etc.):**

The lack of connections with nature in a dense concrete jungle city like Paris, where too few natural spaces at hand's reach remain : the idea of creating a local garden inside the concrete schoolyard of the school was born, to adress the problems of not being connected anymore to the natural cycles, seasonal rythms and watch the living plants grow, produce then give their seeds for a new cycle to begin again... observe and participate for the school community together to protecting this commonality and show it's possible and an accessible "luxury" to reconnect with nature in a dense urban area, promoting a more respectful and resourceful environment for the students and teachers, produce our food...

Joëlle Zask, a contemporary philosopher wrote in her book "La démocratie aux champs" addresses the issue of the close links between citizenship and gardening.

### **2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

- policy makers via Ile de France region which awarded the project a prize through the Green Hackaton in 2019, they received funding in order to buy watering equipment for the garden not visited during the summer holiday break
- various teachers from the general and professional teaching branches of the high school: some from wood carving (built the wooden box for young plants to grow before being planted) and graphic design (students designed the garden signage, plant names cards, a little pathway made of vegetable curves stencils painted on the ground to show the way to the garden)
- a neighbouring community garden, which gave some straw to the Club so they protect their plantations
- a primary school class who visited the garden and exchanged the seeds from their own garden

### **3. Prototype developed (include images):**

- a garden club open every Tuesday at the lunch break, so that any students living on the campus during the day can get involved and take care of the school garden, reconnect with the living world and nature
- a seed bank for exchanges between partners (public neighbouring library)

# SALL exemplary school-project

## BASIC DATA

Project title:	<i>"Hrana s našeg otoka"/ Food from our island</i>
School name:	OŠ Maria Martinolića / Elementary school Maria Martinolića
Country:	Croatia
Number and age of students in the project:	16 students, 14 years of age
Number and profile[1] of teachers involved:	1 geography teacher
Subjects and topics addressed in the project	olive growing, sheep breeding and fishing
URL in the platform:	

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

**A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.**

Mario Martinolić Elementary School is the largest school at the island of Lošinj and has almost 600 students. In addition to the main school building, there are five other dislocated school buildings located in smaller islands of the Lošinj archipelago.

In the past 15 years, we have collaborated with Mario Martinolić Elementary School on several different projects. Some of the projects we have collaborated on are: "Small School of Science", "Living World of Our Islands", "Sea Connects", "Think Blue", "Circle around the Lošinj Archipelago", "Our Treasure Island", "Small School of Sea Treasures", "Mediterranean Cetaceans in our schools"; "Island Naturalists". Our cooperation has always been successful and extremely motivating with mutual respect for proposals and ideas and resulted in joint activities for the benefit of the entire local community on the island of Lošinj.

Our experience in collaboration with teacher Danijela Kalac Desanti is very positive. She is a geography teacher who is extremely active in the local community and introduces students to the customs of the island community. Also, regarding project tasks she is proactive and innovative in organizing project activities.

# THE SCHOOL IN THE PROJECT

**A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).**

The aim of the project is to open schools and local communities in a way that students learn experientially, in direct contact with their local ecosystem. We chose the topic "Food from our island" in order to promote local agricultural production and get to know the traditional island diet and encourage healthy eating habits. The plan was to visit several local farms, but due to the transition to the online model of schooling, students watched video-interviews with them. The students were shown short videos on the topic of "Olive growing", "Sheep farming" and "Fisheries" from which they could see how food is obtained and why it is stimulating to do this work. After each video they watched, the students were given tasks: for example, to design an advertisement for homemade olive oil, to photograph which sheep products you use in your home, to write a fish recipe, etc. Some were very creative in this. At the end of last year's collaboration, we visited the cheese factory of the Agricultural Cooperative Loznati on the island of Cres.

## SALL METHODOLOGY

**1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

We chose the topic because we have realized through previous eco-school projects that food packaging and transport to our island significantly affect the price and quality of the same. We wondered if we can produce food on the island and in what quantity and thus eliminate packaging (or reduce it to a minimum), improve quality (freshness and organic farming) and reduce the price (in which transport is a big item).

**2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

One group of elementary school students numbering 16 students and their geography teacher participated in the second semester of their 8th grade. Planned workshops and a meeting with an olive grower and a herdsman, the students did virtually because of corona restrictions was not possible to meet with them live. When Corona-restrictions were cancelled workshops with fishermen and cheese makers were conducted.

Olive grower – local farmer, participated through video-interview.

Herdsman – local farmer from island Cres, member of Herdsman NGO "Pramenka", participated through video-interview.

Fishermen – local fishermen from island Lošinj, participated in a live event - workshop with students.

Member of NGO Ruta – active member of a local community, participated through video-interview

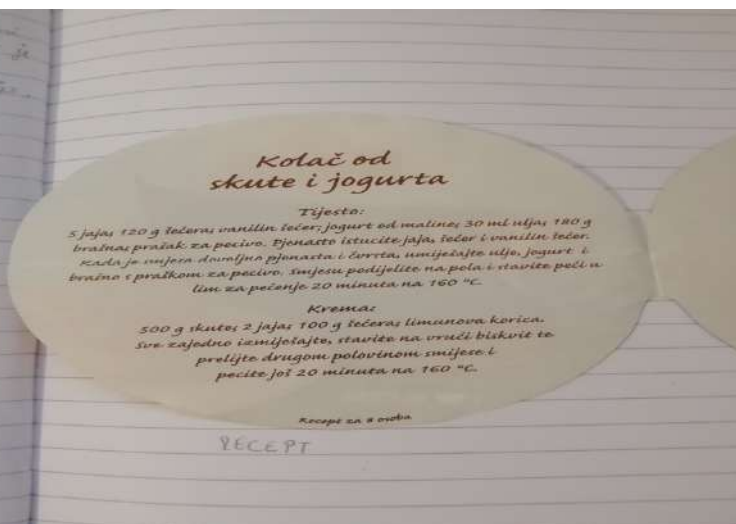
Member of NGO "Studenac" active member of local community, participated in video-interview

Owners of cheese factory – family that is active member of a local community, participated in live event-workshop.

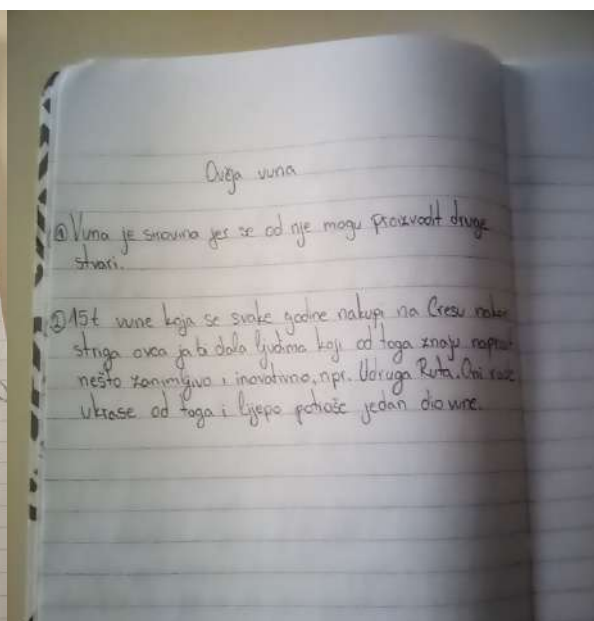
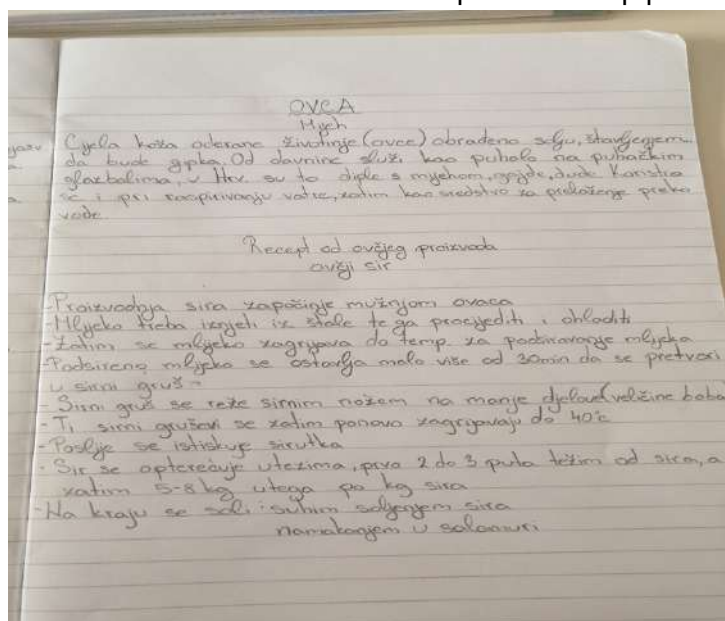
Director of Island development agency – active member of local community, participated in video-interview.

**3. Prototype developed (include images):**





Advertisement for olive oil and recipe with sheep product



Sheep products and their use

#### 4. Other relevant information



Workshop on fish species in the fishing port



Waiting for the fisherman and an early morning interview with him



Visit to the cheese factory





Sheep milking visit

## FEEDBACK FROM PARTICIPANTS

Testimonies, images, overall feedback.

### Teachers

**Geography teacher D.K.D. (39 years old)** I am pleased that, despite the pandemic, we managed to realize this project. My students missed going out on the field like this because they had been closed in their homes for the past year and a half. Geography is best learned through the feet, and I hope that it was instructive for them and that they realized what opportunities our island offers. "

### Students

**Student N.T. (14 years old)** "I participated in the project and in an online conference where I briefly told in English how it was for me at the workshops. I liked the live ones more, and the visit to the cheese factory the most. "

### Societal actors

**Fisherman DR (45 years old)** "I have never told the students about my job, but I think it is good that they see what the job is like on the spot because you can't learn it at school. I hope that my experience will help them choose a future profession and that they will understand that everything is beautiful, but at home it is the most beautiful."

# SALL exemplary school-project

## BASIC DATA

Project title:	Kroz tradiciju i suvremenost, od vrta do stola / Through tradition and contemporaneity, from the garden to the table
School name:	Osnovna škola "Jelenje-Dražice" / Elementary school "Jelenje – Dražice"
Country:	Croatia
Number and age of students in the project:	51 students, aged 11-14
Number and profile[1] of teachers involved:	2 teachers Romina Sabo – biology teacher Dejana Paškvan-Žeželj – school principal
Subjects and topics addressed in the project	Subject addressed: biology, science, IT Topics addressed: food, healthy diet, healthy habits
URL in the platform:	<a href="https://www.schoolofthefuture.eu/en/user/os-jelenje-drazice/projects">https://www.schoolofthefuture.eu/en/user/os-jelenje-drazice/projects</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

**A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.**

Elementary school "Jelenje-Dražice" is located in the Primorje-Gorski Kotar County in the Republic of Croatia. The school is located in the village of Dražice near the city of Rijeka and near the sea, but also near the mountainous part of the Republic of Croatia.

We started the cooperation with the Elementary School "Jelenje-Dražice" with the initial contact of the NC with the school principal, on the recommendation of the Croatian Scout Association, which recommended the school as engaged in the local community and promoters of active and healthy life in the community. The SALL project is the Blue World Institute's first such way of cooperating with this school, but we are extremely pleased with it. Romina Sabo, a teacher in charge of project coordination at the school, proved to be an excellent communicator and an example of a proactive teacher who is willing to invest her time, knowledge and skills for students, but also has motivational skills to involve the local community in school projects. Apart from the SALL project, the Elementary School "Jelenje-Dražice" also participated in the national campaign "Plant a tree, don't be a stump", organized national campaign of planting trees at the local, regional and national level in the Republic of Croatia. By participating in this campaign, the school develops environmental awareness and is a good example of social and environmental responsibility, and thus participates in the implementation of strategies to mitigate the effects of climate change.

# THE SCHOOL IN THE PROJECT

**A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).**

The school principal Dejana Paškvan-Žeželj was contacted by the NC Jelena Basta during October 2021 and was introduced to the project. The school decided to engage in the project in order to introduce students to healthy habits, teach them how to differentiate between healthy and unhealthy food and how to properly make meals.

## SALL METHODOLOGY

**1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):**

We chose to address the problem of GMO food and nutritively bad diet. This problem was chosen because the results of the survey we conducted have shown us that nowadays more and more students base their diet on junk food and unhealthy drinks. The results have also shown that only a small number of student engage in physical activities.

**2. Stakeholders involved (name and profile, how and when they have participated, etc.):**

The project involved students from the 5<sup>th</sup> and 7<sup>th</sup> grade together with the science and biology teacher and the principal of the school. The project started during November and is still going. During the project the following activities were conducted: conducting a survey among students on their eating habits, gardening the school garden, cooking meals out of healthy food, creating a digital cookbook. The students mostly participated in the activities and conducted them in smaller groups or with the support of their parents at home.

**3. Prototype developed (include images):**

The prototype included planting different spices, gardening the school garden, composting, preparing meals and creating a digital cookbook.













## FEEDBACK FROM PARTICIPANTS

### Teachers

The feedback from the teachers was overall positive, but there were some difficulties they encountered during implementing the project. The biggest problem were the weather conditions that made planting and gardening difficult.

### School leaders

The school principal was honoured that the school was invited to participate in this international project. It is her belief that this is a great way of introducing students to international projects and a great way to encourage them to live a healthier lifestyle.

### Students

The students involved in the project were thrilled to learn something new and to participate in creating something different and significant for their school. They were especially happy to participate in the gardening and preparing meals out of healthy food.



## Societal actors

Since the project is still ongoing we currently do not have a feedback from our local family agricultural business included in the project. However, when we introduced them to the project they did say that it is a great opportunity to show students and teachers the manufacturing of ecological corn flour and cheese.

# SALL exemplary school-project

## BASIC DATA

Project title:	MENU OSASUNGARRIAK GUZTIENTZAKO! (¡MENÚS SALUDABLES PARA TODOS/AS!)
School name:	SAN FELIX IKASTOLA
Country:	Spain
Number and age of students in the project:	49 students (14-15 years) + 47 students (15-16 years)
Number and profile[1] of teachers involved:	4 teachers (1 biology, 1 technology and 2 Physical Education teachers, previous experience on European projects such as OSOS)
Subjects and topics addressed in the project	Biology and Geology: food and nutrition (Nutrition function) Technology (ICT): spreadsheet management. Physical Education: warm-up, maintenance and stretching exercises.
URL in the platform:	<a href="https://www.schoolofthefuture.eu/es/sall/project/menus-saludables-para-todosas">https://www.schoolofthefuture.eu/es/sall/project/menus-saludables-para-todosas</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.

San Felix is a concerted school in the small town of Ortuella, Bizkaia. Despite being a small school, it is a very advanced educational centre in terms of infrastructure and the innovative character of its teachers. The University of Deusto has collaborated on several occasions with the San Felix school and therefore recognises the value of this school for its continuous dedication to pedagogical innovation. San Felix School also participated in the OSOS project and also collaborates in other initiatives with local entities, for example in the First Lego League.

## THE SCHOOL IN THE PROJECT

A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).

The national coordinators in Spain were in contact with San Felix school and its teachers from the very beginning of the SALL project showed interest in the project and the methodology.

# SALL METHODOLOGY

1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

The initial question was how to apply something learnt in class to society. The answers were varied, but the most popular were two: on the one hand, to apply their tastes and preferences to the school menu and make proposals for the school canteen; on the other hand, to apply the knowledge acquired in class to people who may have more difficulties in knowing how to prepare healthy menus. Teachers supported the last idea, perhaps encouraged by the fact that the school menus are very well prepared and controlled, but there is a part of society that does not really have this possibility and perhaps they could do some interesting work there.

As for the Comparte Association, both pupils and teachers thought of it because of its proximity, as it is an organisation run by people from Ortuella for families from Ortuella, and the school collaborates very actively with it, so the pupils know it very well.

2. Stakeholders involved (name and profile, how and when they have participated, etc.):

1. Comparte Association: food bank for families with economic needs in Ortuella, managed by anonymous people, without any profit motive, and with the small additional help of the 4th year of secondary education students. They had already worked with this association beforehand, and during this academic year they proposed the idea of "menus for everyone" and as well as approving the proposal, they have collaborated with them in the requirements they have had for the list of foodstuffs and doubts in this respect.

2. Gure Etxea and Gessyma-Galea: catering company and company-laboratory for quality control and food consultancy, which prepare the daily menus for the school. The relationship with these companies was based on the proximity to them, and from there they have worked together firstly to professionally guide their students in achieving their objective, that of applying the learning to people who may need it, and subsequently, in correcting the work and sharing it in class.

3. Degree in Physical Education at the University of Deusto: thanks to the mediation of the Spanish national coordinator of SALL, they have been in contact with a department of the aforementioned degree to prepare the corrections of what they call physical menus, a task in which the teaching staff of both centres are involved, and which the students of San Felix School can later compare with the students of the degree in Physical Education at UD.

3. Prototype developed (include images):

Two types of menus have been developed, on the one hand, some proposed menus to be prepared with food from the bag given to Comparte families, and on the other hand, some menus to keep fit using everyday items from home or from the street.

At the moment they are in the correction phase of the menus, as the former have been supervised by the nutritionists who work for the catering company that serves their school; and the latter will soon be checked by a team from the university degree in physical education at the University of Deusto.

When they have finished with the corrections, the two types of menus will be presented in a digital and attractive way, as well as being shared with the end users by means of a QR code on the Comparte association's solidarity bags.

San Felix school has designed the project according to the SALL project phases:

#### CO-CREATION:

- Reflection with students on the processes involved in the food system and on local food problems in the local community.
- Select a local need and come up with ideas for solutions. In this phase they define the objectives of the project

#### EXPLORATION:

- Concrete objects in prototypes: the association's foodstuffs database and healthy menus provided by QR codes on the Comparte association's solidarity bags.
- They meet with the association to present the objectives and the ideas put forward.
- Agree with the association on the definition of the requirements of the database.

#### EXPERIMENTATION: (the school is currently in this phase)

- Coworking with the association to generate the database, get to know the association's warehouse, how they work, etc.
- Coworking with catering company and experts on Physical Education to create the menus.

#### EVALUATION:

- Test the designed database with real users of the association to determine if it facilitates its management, to identify errors and possible improvements.
- Disseminate the new menus among the association, among families and among the whole school community and collect information on the population's interest in the resources and on satisfaction with the resources generated.
- Reflect on the results in the classroom and define new objectives.



# SALL exemplary school-project

## BASIC DATA

Project title:	Analysis of the eating behaviour of the students
School name:	COLEGIO JESÚS-MARÍA IKASTETXEA
Country:	Spain
Number and age of students in the project:	50 students (14-15 years)
Number and profile[1] of teachers involved:	2 teachers (English and science teachers, experience in previous European projects such as OSOS)
Subjects and topics addressed in the project	Sciences (physics, chemistry, biology, topical science, etc)
URL in the platform:	<a href="https://www.schoolofthefuture.eu/en/sall/project/analysis-eating-behaviour-students-jm-bilbao">https://www.schoolofthefuture.eu/en/sall/project/analysis-eating-behaviour-students-jm-bilbao</a>

[1] Subjects they teach, previous experience with them in other projects, other management responsibilities in the school, etc.

## THE SCHOOL

A qualitative description of the school by the NC. According to the NC, what the school is like, most relevant characteristics related to their involvement in SALL, previous collaboration or not in other initiatives, etc.

Jesús María is a concerted school that still has little experience in international projects but is very willing to embark on processes of pedagogical innovation; Jesús María School also participated in the last phases of the OSOS project and therefore has already had some previous experience in the open schooling methodology. The teacher leading the SALL project in the school is a highly motivated teacher, eager to innovate and to transform the lessons of the pupils. It could be said that Jesús María School does not have much experience in involving local actors in the school's educational projects.

## THE SCHOOL IN THE PROJECT

A brief description of how this school was involved in the project. (i.e. who contacted them, how and when they knew about the project, why the school engaged in the project, etc.).

The national coordinators in Spain were in contact with Jesús María school and its teachers from the very beginning of the SALL project and showed interest in the project and the methodology from the very beginning.

Jesús María School was clear from the beginning to approach the project from the point of view of nutrition, to tackle the problem from the composition of food, the caloric weight of food, etc., and also had a clear

STEAM approach, creating a solution by putting into practice various instrumental skills such as the digital skill.

## SALL METHODOLOGY

1. Real problem addressed (i.e. how and who chose the problem, which other alternatives were discussed, etc.):

The identified problem is that students do not have good eating habits at breakfast, lunch and snack. Jesús Maria School defined the following objectives for the project:

- Assess the amount of sugars taken in the breakfast and brunch and find the consequences in our body of high sugar level a diet
- Discover and elaborate healthy alternatives for their menus.
- Make our community known the results of our research and get them involved into the healthy alternatives elaboration process.

The problem was chosen after an initial reflection among the students about the food system and their local environment. The students identified this problem because it was close to them. The teacher also guided some of the project objectives according to the needs of the educational curriculum.

2. Stakeholders involved (name and profile, how and when they have participated, etc.):

Jesus María School took part in an event managed by the University of Deusto for schools and agents of the food sector in 2021. In this initial session Jesus Maria had only defined the general objective of working on the nutritional composition of food, however this open session of sharing ideas with agents helped them to specify the project and to identify collaborating agents for the following phases of the project.

The event attended nutritionists, pediatricians, prestigious chefs, sports nutritionists and the Basque food cluster, among others.

Jesús María school began his collaboration with a team of nutritionists at this session.

3. Prototype developed (include images):

After a creative process to propose solutions to the problem from biology and technology, students d their solution: carry out research to analyse eating habits and create an informative website with the results of the study and useful information for the community on healthy eating.

In the first stage of the project, to find out about the eating habits of secondary and first-year secondary school pupils, students analyzed the amount of unhealthy carbohydrates (rapidly assimilated sugars) and the consequences for health.

In the second stage of the project, students offered healthy alternatives for the pupils that come from their usual suppliers, in addition to their cultivation.

In addition, in the final stage of the project students created a set of menus in the school and then sold them at a symbolic price to raise funds and contribute to an NGO.



#### 4. Other relevant information

Jesús María school has designed the project according to the SALL project phases:

##### CO-CREATION:

- Reflection with students on their eating habits, the nutritional value of food, calories in diets, etc.
- Reflection on misconceptions about food.
- Definition of the project objectives.

##### EXPLORATION:

- Creative process to propose solutions to the problem from biology and technology.
- Definition of the solution: an investigation to analyse eating habits and the creation of an informative website with the results of the study and useful information for the community on healthy eating.

##### EXPERIMENTATION:

- Design of the online questionnaire to collect information about the food we eat.
- Ask expert nutritionists about specific nutritional questions.
- Registration of the food in a database and calculation of its energy value.
- Design of the website.
- Creation of resources for the website.
- Involve school canteen providers in the project.
- Propose healthy diets to the school canteen.

##### EVALUATION:

- To make an assessment of the data recorded on the nutritional value of the food we consume.
- Evaluate the usability and usefulness of the website with end users such as students from other courses and family members.
- Assess the impact of the solutions created and propose changes and improvements.

## FEEDBACK FROM PARTICIPANTS

Testimonies, images, overall feedback.

### Teachers

The team of teachers at Jesús María has been very involved in the project since its beginning. They have perfectly understood the methodology of living laboratories. The teachers' initial interest was in designing a STEAM project and now they are much more focused on designing STEAM projects but with a real impact on their community. They have observed that collaboration with local stakeholders makes students more empowered and motivated, which has a significant impact on their learning.

The team of teachers, in view of the good response from the students, are already working on defining another new project using the SALL methodology and focusing on a different topic of the food system.

## School leaders

The school management is satisfied with the project and therefore continues to support teachers in implementing the methodology in more groups of students and involving more teachers.

## Students

The students have expressed their satisfaction with the project, with the methodology and with the topic and the problem chosen. Among the students' comments, the following stand out: "it is interesting because we are working on problems that are close to us and that we know well", "it is more interesting than learning the contents of the book", "I liked being able to create a solution with my knowledge". In general, the students' feedback has been very positive. The involvement and motivation in the project has been very high.

## Societal actors

Some societal actors indicated they enjoyed working with the students, and said they were inspired by them.