

*Practical guideline for universities and non-profit organisations*



## **Sustainable development – understanding - implementing - creating**

**Service-Learning - Engagement of students  
in nature and environmental protection**

# IMPRINT

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This publication is available as an online resource in German, English and Croatian on the website of the publishers.

Neu-Pastin (Germany) and Split (Croatia) 2018

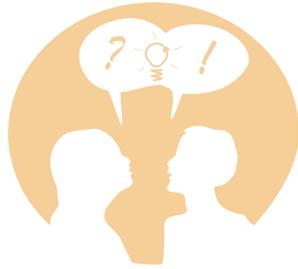
The guideline was created within the frame of the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian cooperation project for students" (2015-2018), funded by the German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt).

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## FOREWORD

The orientation of society towards sustainable development is one of the greatest challenges of our time. Sustainable development means combining environmental aspects with social and economic aspects in a holistic way. The Sustainable Development Goals (SDGs), which came into force in 2016, and the concept of planetary boundaries, which scientifically defines the Earth's load limits, provide groundbreaking guidelines for shaping global sustainable development.

Education and participation are indispensable foundations for the necessary transformation towards a sustainable society and lifestyle. Participation and active commitment are closely linked to the development of appropriate skills and abilities for shaping a sustainable society. Service-Learning as an innovative teaching and learning arrangement starts exactly at this point and promotes the development of civic engagement. In Service-Learning projects, young people actively participated in mastering existing tasks and solving problems in their environment.

The project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students" is also based on this general concept: in the context of Service-Learning projects, especially the commitment in the area of nature and environmental protection was to be promoted. The environmental Association Sunce was able to acquire extensive expertise within the scope of the project and thus takes a leading role in Croatia in the implementation of Service-Learning with a focus on nature and environmental protection. Sunce's intention to disseminate and multiply post-project knowledge and experience nationwide is very welcome. The German Foundation for Environmental Education (DGU) played an important role in the project as project partner, which succeeded in incorporating successful Service-Learning approaches from Germany into the project and making them known in Croatia. Fortunately, the Service-Learning programmes developed and tested in practice as part of the project also offer valuable results and concrete suggestions for nature conservation and environmental protection in Germany.

*Dr. Ulrich Witte  
German Federal Environmental Foundation (DBU)  
Head of Environmental Communication and Cultural Property Protection, International Contacts*

## PREFACE

Commitment and active participation are essential for the sustainable development of society and therefore the protection of nature and the environment. But how do we manage to motivate young people to engage socially? With the help of the guideline "Service-Learning - engagement of students in nature and environmental protection" we are pleased to be able to give you concrete suggestions for the practical implementation of Service-Learning at universities in the area of nature and environmental protection. The guideline summarizes the essential experiences and results of the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian cooperation project for students". The project was carried out between 2016 and 2018 in cooperation between the Croatian Association for Nature, Environment and Sustainable Development (Sunce) and the German Foundation for Environmental Education (DGU) and was heavily supported by the German Federal Environmental Foundation (DBU).

The aim of the project was to promote civic engagement among students of the University of Split in connection with increasing public awareness of nature and environmental protection. This was achieved through the innovative teaching and learning method of Service-Learning in close cooperation between the environmental Association Sunce as a non-university partner and four faculties of the University of Split, the Faculty of Chemistry and Technology, the Faculty of Humanities and Social Sciences, the Faculty of Economics and Business Administration as well as the Department of Marine Research. As part of the Service-Learning programme, students developed ideas for promoting environmental knowledge and awareness, focusing on sustainable tourism and sustainable waste management as these have a particular local relevance in Split. The students developed actions in cooperation with the environmental Association Sunce, to be carried out in the context of interactive events as well as international environmental days and to be addressed to students of the University of Split and citizens of Split.

The impulses for exemplary Service-Learning initiatives at universities in Germany had a major impact on the implementation of the Service-Learning programme. The representatives of the environmental Association Sunce and the four faculties of the University of Split were able to get to know the implementation of Service-Learning first-hand using selected universities and their non-university commitment partners as an example during a practical visit to Germany. This experience and knowledge served as a basis for the development of the Service-Learning programme, which was carried out in cooperation between the environmental Association Sunce and the four participating faculties of the University of Split.

This handbook combines theoretical principles as well as practical experience and suggestions from the project period. It invites universities and civil society organisations to use these to make teaching and learning action-oriented and to motivate students to play an active role in solving society's problems and challenges.

The handbook is a continuation of the efforts of the environmental Association Sunce to develop working materials that promote civic engagement and active participation in environmental protection, the use of participatory teaching and learning methods and informal learning. Like the first publication of the series "Sustainable Development - Understanding, Implementing and Creating", this handbook appears not only in Croatian and German, but also in English. This offers the opportunity to spread experience and knowledge beyond national borders and to give educational designers in other countries impulses for their work with young people.

We wish you good luck and a lot of social engagement!

*Gabrijela Medunić-Orlić (Association Sunce) & Stephanie Pröpsting (DGU)*

# INTRODUCTION

## A changing world - Challenges and approaches for educational work

At the 2015 United Nations World Summit in New York the goals for sustainable development were adopted in the form of "Agenda 2030 for Sustainable Development". All 193 countries of the world have signed this agenda. The World Future Treaty is based on the fact that environment and development are inextricably linked and at the same time development and prosperity are lost if we disregard planetary limitations and continue to destroy our livelihood. The Sustainable Development Goals (SDGs) list 17 sustainable development goals that describe what is to be achieved together by 2030. They aim for comprehensive change and provide guidelines for sustainable development on economical, ecological and social levels. Among other things, healthy living and sustainable lifestyles are to be promoted worldwide and the ecological limits of the earth are to be respected.

The SDGs form a social foundation on which the promotion of skills and competences must be built in order to shape the future in a sustainable way. In particular, education and participation are a necessary condition for a transformation towards a sustainable society and way of life.<sup>1</sup> Providing high-quality education for all people is therefore one of the 17 global goals. Education also plays an essential role in achieving the 16 other global goals. The young people of today will have grown up in 2030 and are directly affected by the achievement of the goals, it is about their personal reality of life and future. This results in the necessity of the educational mandate. This is also emphasized by the call of the German Advisory Council on Global Change (WBGU) for a "major transformation"<sup>2</sup> towards a globally sustainable society. According to the WBGU "change agents" or "pioneers of change" are of decisive importance for implementing the transformation. Such pioneers "are committed to certain changes and actively promote them".<sup>3</sup> People's ability to learn and their commitment are central resources for the transformation process and active participation forms the basis for change. "Only educational situations that enable active commitment and participation, in the context of which learners can contribute not only to the work but also, if necessary, to the construction and modification of questions on key issues of sustainable development, form the basis for the acquisition of necessary skills and competences for shaping a transformation towards a sustainable society"<sup>4</sup>.

In 2015, UNESCO adopted the "Global Action Programme on Education for Sustainable Development" (2015-2019)<sup>5</sup> to implement the SDG's educational goal. In addition to contributing to education, this should also contribute to promoting sustainable consumption and fighting climate change. The World Action Programme identifies five priority areas for action. One field of action is devoted in particular to strengthening and mobilising young people and demands to support them in their role as "pioneers of change" for sustainable development. Young people are credited a special interest in a better future for themselves and future generations as well as a driving force for educational processes. Another field of action relates to teachers and calls for the skills and competences of these actors to be strengthened and expanded with regard to relevant issues of sustainable development and corresponding teaching and learning methods.<sup>6</sup> To implement the World Action Programme, the "National Action Plan of Education for Sustainable Development"<sup>7</sup> was adopted in Germany, which relates to both formal and non-formal areas of education. In Croatia, so far the Croatian government has taken little initiative for the integration into the education sector beyond the "Education for Sustainable Development Action Plan" (2011-2015). Education for Sustainable Development in Croatia is mainly implemented through non-formal education and is largely not included in formal education processes.

## Education for Sustainable Development (ESD)

In our world, which is undergoing dynamic change, young people must be enabled to participate actively in social processes, i.e. to be able to solve problems relevant to the future and to possess specific capacities to act. Here the pedagogical concept of ESD responds and offers learning opportunities and learning content that contribute to the transfer of knowledge, values, attitudes and capacities to shape society for the future. ESD focuses on the living environment and the experiences of young people, incorporates innovative and, in particular, participatory learning methods and addresses ecological,

8 <sup>1</sup> See Bittner/Pyhel (2016), p.7 ff. <sup>2</sup> See WBGU (2011). <sup>3</sup> WBGU (2011), p. 257. <sup>4</sup> Bittner/Pyhel (2016), p.17. <sup>5</sup> See <https://en.unesco.org/gap> (19.03.2018). <sup>6</sup> See UNESCO (2014) and DUK (2014). <sup>7</sup> See BMBF (2017).

economical, social, local and global issues. Participation is a fundamental principle of ESD. The word participation comes from Latin and means, amongst others, "collaboration, involvement, inclusion". The term "participation" is used in many ways. In colloquial language, this means participation in decisions that affect one's own life as well as that of a larger community. The participation of young people through participatory forms and methods of learning should always take place in connection with central themes of sustainable development (e.g. climate, energy, water, fair trade, biodiversity, healthy nutrition) and is an indispensable prerequisite for the acquisition of competences for responsible shaping of the future (shaping competence).<sup>8</sup>

The teaching and learning method Service-Learning starts right here and offers a pedagogical concept that enables learners to become actively involved in society and to contribute to solving social problems.

## **Teaching and learning method Service-Learning - Learning through engagement**

The origin of Service-Learning lies in "Civic Education", an education for democratic action and civic engagement that comes from United States of America. The basic idea of Civic Education is that learners acquire democratic thinking and action through social learning and civil society involvement.<sup>9</sup> In the US, Service-Learning has become a widespread teaching and learning method in schools and universities. The basic idea of the didactic method is to combine theoretical teaching content with practical work in non-profit organisations. In Service-Learning projects, learners stand up for the interests of their city, their district and society and thus serve the common good. The commitment can be in social, cultural or political area or in the field of nature and environmental protection.<sup>10</sup>

## **Topics for Service-Learning in nature and environmental protection**

As a dimension of sustainable development, environmental and nature conservation issues represent an essential cornerstone for promoting the common good and contribute to the nature and environment worth living in. In the field of environmental protection and nature conservation, there are many starting points for Service-Learning. According to the motto "Think global - act local", a wide range of problems and challenges can be identified at a regional level that provide a starting point for the commitment of learners. In the practical part of the handbook (chapter 2) three Service-Learning projects are presented. These focus on the topics "Sustainable tourism" and "Sustainable waste management" as two local problems and challenges of the city of Split and the Split-Dalmatia region as well as the topics "Citizen Participation and Access to Information" in Croatia and "Water and Consumption" as a globally oriented topic. These topics are briefly introduced below.

### **Sustainable tourism**

As one of the leading tourist destinations in the Mediterranean, Croatia attracts visitors mainly because of its unique and well-preserved nature. As the development of tourism is mainly linked to the coastal areas, it is an important economic sector, especially in the Split-Dalmatia region. Here rapid development, a weak infrastructure, low environmental awareness and a lack of implementation of environmental protection measures cause numerous problems. Tourist activities have a major impact on the environment. Increasing numbers of tourists and the related growing coastal development have contributed to increasing problems in the areas of waste management, water management, wastewater treatment, energy, illegal construction, etc. .

### **Sustainable waste management**

Non-sustainable waste management is one of the biggest environmental problems in the Split-Dalmatia region, especially in Split, Croatia's second largest city. In recent years, important laws and regulations accompanying the EU directives have been adopted. However, the measures necessary to avoid and reduce waste were not implemented satisfactorily. Neither in the private sector nor in municipal administrations is there any scope given to this field of activity. The desolate waste management system already has a multitude of negative effects on drinking water, air, sea, soil, climate, human health and the well-being of other living organisms. In practice, waste management in Split is still a long way from the targeted waste management system "Reduce, Reuse, Recycle", which is based on the principles of recycling management, the general principles of the EU and the new Croatian laws.

<sup>8</sup> de Haan (2008). <sup>9</sup> See Frank (2005), p.2. <sup>10</sup> For more information on Service-Learning see chapter 1 of the manual.

## **Citizen participation and access to information**

The successful protection of nature and the environment can only be achieved through the active commitment of all members of society. Public participation in nature conservation and environmental protection in Croatia finds its legal basis in international legislation, in particular to the Aarhus Convention and in the Croatian environmental legislation. The right of access to information, public participation in decision-making and access to justice in environmental matters<sup>11</sup> are the three pillars of the Aarhus Convention. Although there is a legal framework in Croatia that ensures and enables public participation, these requirements are not sufficiently implemented. The main reasons here are low awareness of the relevance of the topic as well as the lack of knowledge transfer and promotion of competences for shaping participatory processes - both among those responsible and among citizens and participating organisations.

## **Water and Consumption**

Through our daily consumption of products and food we consume so-called "virtual water". This means water that is consumed, evaporated or polluted in the production and transport of industrial goods and foods. In this way, for example, the water used to irrigate vegetables and the water used for animals and for forage plants for meat production is displayed. For example, each cup of coffee contains an average of 140 litres of water, one kilogram of beef 15,500 litres and one pair of jeans 8,000 litres.<sup>12</sup> Much of the water we consume every day is imported from countries where water is scarce and where water has become a very precious commodity.

## **Service-Learning at universities - Good reasons for the teaching-learning method**

Essential in Service-Learning is that learners do something for other people, the environment and society and gain democratic experience in the process. In addition, there is a close link between the curriculum and the commitment projects that are being implemented.<sup>13</sup> Regarding the university, this means that academic teaching is combined with civic commitment, i.e. scientific contents of university teaching are combined with non-profit commitment. This creates a real benefit for society and a gain in practical and experiential orientation for university teaching: contacts are established between a non-profit/common-interest institution and a university and knowledge transfer is made possible. The university is gaining relevance for society, profiles itself and can create further cooperation in the future. For students, Service-Learning offers a combination of theory and practice, a view "beyond the book", learning through experience and the development of important competencies. Finally, this method contributes to professional qualification and the ability to participate as a citizen. Another argument in favour of Service-Learning at universities is the "bachelorising" of the courses. By shortening and modularizing their studies, students feel restricted and determined by others, which in turn reduces their readiness for civic engagement. In addition, the students' ability to participate, take on responsibility and play an innovative role is neglected. Because of the purely subject-specific focus in their studies, the students, as later decision-makers and responsible persons, lack foresight and empathy in social situations. Furthermore, the theoretical orientation of the study programmes and the lack of practice result in less learning motivation, a superficial anchoring of knowledge and a low promotion of key competences. This in turn entails a limited ability to work. In view of the major challenges facing society, the very same also expects universities to ensure that knowledge does not remain in the "ivory tower". Universities are called upon to take on the so-called "Third Mission", the transfer of knowledge and the link with society, as the central task of the university.<sup>14</sup>

10 <sup>11</sup> Citizens can go to court if authorities do not respect or fulfil the rights and requirements created by EU environmental legislation.

<sup>12</sup> See <http://virtuelles-wasser.de/produktgalerie.html> (19.03.2018). <sup>13</sup> See Seifert (2012), p. 13. <sup>14</sup> Based on a presentation by Dr. Imke-Marie Badur, University of Kassel (28.06.2016).

## Involved partners - Motivation of the faculties of the University of Split and the environmental Association Sunce

The Croatian Service-Learning programmes presented in this handbook were implemented in close cooperation between the environmental Association Sunce as a non-university partner and the four faculties of the University of Split. All participants showed a high degree of motivation during the planning and implementation of the Service-Learning program. The first structured Service-Learning programmes were carried out by the environmental Association Sunce in 2014 in cooperation with the Science and Technology School in Split. The recognition that Service-Learning offers good opportunities to pursue the fundamental goals of the environmental Association Sunce, such as Environmental Education, Education for Sustainable Development and promotion of civic engagement, motivated Sunce to conduct Service-Learning in cooperation with the faculties of the University of Split. It turns out that this decision contributes greatly to strengthening the organisational and technical capacities of Sunce. Through the cooperation with the faculties the knowledge and skills of the Sunce staff and volunteers are promoted. The participating faculties had no experience with Service-Learning before the start of the project but had experience in working with local institutions. An important reason for the faculties to participate in the Service-Learning project was not only the acquisition of knowledge and experience within the framework of the implementation of the programme, but also, in particular the possibility of promoting civic involvement in the field of environmental protection and nature conservation among students. Finally, the participating teachers also got to know and appreciate the advantages of Service-Learning through their participation in the project like the promotion of knowledge and skills of both students and teachers and the valuable, practice-oriented addition to the specialist content of the curriculum.

## Structure and handling of the guideline

The handbook is aimed in particular at civil society organisations and teachers at universities who wish to implement Service-Learning projects in their institutions. It provides an overview of the essential aspects of Service-Learning at universities and presents the implementation using practical examples.

Chapter 1 begins with a brief introduction to the basic principles and components of the teaching and learning method of Service-Learning. In favour of the presentation of practical examples in chapter 2, the first chapter does without a comprehensive theoretical explanation and, among other things, refers to the handbook "Academic Service-Learning" of the Eastern Michigan University<sup>15</sup>, translated into Croatian, as well as the practice guide "Do it! The Agency's Programme for Social Commitment at Universities" by the agency "mehrwert"<sup>16</sup>.

Chapter 2 presents selected Service-Learning projects in the field of nature and environmental protection. The examples offer an insight into the practical implementation of Service-Learning in Croatia and Germany. Chapter 2.1 presents the Service-Learning programme "Public events on the topics of sustainable waste management and sustainable tourism", which was realised in cooperation between the environmental Association Sunce and four faculties of the University of Split. In chapter 2.2 this is followed by a Service-Learning project, which was carried out in cooperation between the environmental Association Sunce and the Faculty of Economics at the University of Split on the topic of "Citizen participation in responsible management of natural resources". Chapter 2.3 presents a Service-Learning example from Germany realised in cooperation between the Leibniz Institute for Science and Mathematics Education (IPN) in Kiel and the Flensburg Science Center Phänomena on the topic of "Media communication of sustainability knowledge on the subject of water and consumption". The examples are presented based on the four phases for planning and implementing a Service-Learning event (see chapter 1.4). The examples offer an insight into different implementation approaches and invite the reader to use these suggestions for their own work.

Chapter 3 lists selected challenges that have come up in the context of the Service-Learning projects in cooperation between the environmental Association Sunce and the faculties of the University of Split

<sup>15</sup> The manual was translated into Croatian by the Croatian Association for Civic Education and Social Development (DIM, 2006) and is available in public libraries. <sup>16</sup> mehrwert – Agentur für Soziales Lernen (2018).

and gives valuable tips and suggestions for the implementation of Service-Learning with the tried and tested solutions.

Materials to support practical work are bundled in the appendix "Materials for Practical Use". In addition, a compilation of the literature sources and web links used to create the manual can be found for further information and in-depth study.

We would like to point out that the groups of persons and professions used in this manual always include both men and women.



# 1. Service-Learning - Social engagement in connection with professional learning

## 1.1 Service-Learning at universities<sup>17</sup>

The basic idea of the didactic method of Service-Learning is to combine theoretical teaching content with practical work in non-profit organisations. In Service-Learning at universities, students take on responsibility for a project outside their university and contribute to the community with their commitment. The core of Service-Learning is to combine scientific seminar content (learning) with community involvement (service) (= learning or competence development through civic involvement). Therefore, in Service-Learning there is a close link between the technical content of the curriculum and its practical application at the engagement partner. The commitment of students in a non-profit institution supports them in establishing a relationship to reality and in illustrating and processing the theoretical contents. The characteristics of a Service-Learning event are very diverse. For example, students of education in cooperation with a risk school offer reading training for primary school pupils, students of heating and electrical engineering apply their specialist knowledge in energy consulting for public and public welfare-oriented institutions in their city or students of the faculty of architecture develop a barrier-free construction concept for a retirement home. By participating in Service-Learning projects, students are encouraged to assume responsibility in society and to develop democratic design skills.

Service-Learning at universities is characterised by two main components:<sup>18</sup>

- within the framework of a regular course, the theory on a specific topic is prepared scientifically (learning component);
- in the service component, students apply the theory in the non-profit area (e.g. in a non-profit organization).

Service-Learning is always linked to study and teaching and both the curricular anchoring and the service concept must be present. This distinguishes Service-Learning from extracurricular voluntary activities such as the concept of Community Service as well as subject-specific/occupationally oriented internships. The focus of Community Service is on charitable activities, but the learning components or the curricular connection are missing. Although the internship has a curricular connection, the service concept or the focus on the voluntary charitable commitment of the students is missing.

Service-Learning does not change the technical content of university courses, but the way knowledge is acquired. Service-Learning has its origins in the US tradition of experiential learning, learning through experience. An important representative of experience-based learning was the American John Dewey. According to Dewey, "this form of teaching is based on the pedagogical principle that human individuals learn through the combination of thinking and acting, reflection and practice, theory and application. Therefore, learning is successful if it is aimed at solving practical problems of action".<sup>19</sup>

<sup>17</sup> In reference to: University of Mannheim (o.J.), p. 1. <sup>18</sup> University of Mannheim (o.J.), p. 1. <sup>19</sup> University of Mannheim (o.J.), p. 2.

## 1.2 Principles of Service-Learning<sup>20</sup>

The three main principles for the implementation of Service-Learning are the connection of the engagement project to the real needs of the engagement partner (reality), the mutual support between the university and the non-university engagement partner (reciprocity) and the link between theory and practice or the knowledge and actions of the students (reflection).

The principles of Service-Learning are the three “R’s”:<sup>21</sup>

- **Reality**  
The commitment is based on real needs and problems.
- **Reciprocity**  
All participants give and take, so they learn from each other.
- **Reflection**  
Linking of scientific content, work on the project with partners and the development of one's own professionalism.

These so-called three “R” are outlined below:

### Real need (reality)

It is essential that the students' commitment is oriented towards real needs and problems and is based accordingly on a real need for support or on real problems of the non-university partner. Based on the learning objectives of the seminar, concrete tasks and objectives of the Service-Learning project are agreed upon with the commitment partner.

### Principle of reciprocity (reciprocity)

The principle of reciprocity benefits students, universities and cooperation partners equally. Students gain important practical experience, acquire social skills and become more sensitive to the problems of their environment. Through interaction with society, academic teaching and research is linked to questions, problems and challenges of civil society. The universities open to the outside world, integrate themselves into their social environment and the cooperation partners receive external scientifically sound support.

### Linking knowledge and action (reflection)

Another principle of Service-Learning are regular reflection units in which practical experience is contextualized and a bridge is built between theory and practice. The connection between the theoretical content and its practical relevance is illustrated by means of reflection. This leads to a deeper understanding of the subject matter and stimulates students to think about themselves and their job profile. Specific questions cause them to rethink situations and actions in the context of their Service-Learning activity and to evaluate and classify the impressions as well as the experiences gained, and skills learnt. Furthermore, the students can work on their experiences from the practical application of scientific findings and exchange them with each other. Reflection is “the link between service and learning” and the key to enabling students to “learn through experience” in Service-Learning.<sup>22</sup> A collection of different methods for performing a reflection are listed in the material part (see material 1.1).<sup>23</sup>

“Reflection specifically links knowledge and action. This demonstrably leads to better learning outcomes than under conventional learning conditions, provides students with insights into real social contexts, promotes their willingness to assume social responsibility and contributes to personal development.”<sup>24</sup>

14 <sup>20</sup> In reference to: University of Mannheim (o.J.), p. 1. <sup>21</sup> Sliwka (2014). <sup>22</sup> Seifert/Zentner/Nagy (2012), p. 94. <sup>23</sup> Exemplary questions for reflection can be found in Material 2.2 of the handbook “Sustainable Development - Understanding, Implementing and Creating” (2015), p. 72f. <sup>24</sup> See Service-Learning website of the Martin-Luther-University of Halle-Wittenberg: [www.servicelearning.uni-halle.de/index.php?id=22](http://www.servicelearning.uni-halle.de/index.php?id=22) (08.01.2018).

For quality assurance, in addition to reflecting on the learning process, the implementation of the Service-Learning Seminar can also be evaluated (see material 1.2 and 1.3).

### 1.3 Conceptual basics of a Service-Learning event<sup>25</sup>

For a Service-Learning event to be successfully implemented, the following basic aspects should already be considered in the initial conceptual considerations:

1. Service-Learning is an organised service provided to the community/public institution.
2. This service meets a community need.
3. A meeting of the participating actors takes place at which the cooperation partners introduce themselves, communicate their needs, formulate project goals together with the students and plan the service.
4. The Service-Learning course is integrated into the university's teaching programme (curricular anchoring).
5. The service will be selected or designed in such a way that practical aspects of the academic seminar can be found or applied/implemented.
6. The course develops possible solutions for the identified problems and concerns.
7. The Service-Learning project offers structured opportunities for reflection.
8. The Service-Learning project is evaluated at regular intervals.

#### Example University of Kassel

The University of Kassel in Germany has developed three criteria that courses must meet to be considered Service-Learning:<sup>26</sup>

- They offer a service for a non-profit/common-interest institution that meets a real social need and has a concrete social added value.
- They are part of the university curriculum, are integrated into the faculty/institute, are supervised and offer students the opportunity for reflection.
- They offer students direct contact with relevant non-university actors and those affected or direct experience of other social situations.

## 1.4 Phases of a Service-Learning event<sup>27</sup>

The planning and implementation of a Service-Learning event ideally comprises the following four phases, the components of which can be flexibly designed:

### 1. Planning of the Service-Learning event:

- conceptual considerations - finding ideas for the seminar content
- preliminary discussions with external partner organisations - including target agreements
- development of the seminar concept - processes & learning and project goals
- organization of the course

### 2. Start of the event:

- attracting students
- kick-off workshop - information about the requirements of the seminar, distribution of tasks, planning of reflection and, if necessary, evaluation, arranging appointments
- contract - objectives agreed upon between students and partner organisation

### 3. Course of the event:

- thematic basics - teaching theoretical contents
- principle: to find a balance between a scientific base and the practical project
- service activities
- reflection (and if necessary, evaluation) of the service activity
- communication "in a triangle" between students, teachers and partner organisations

### 4. Completion:

- documentation and, if necessary, certification of acquired competencies
- final event with all participants - recognition and presentation of the results, awarding of performance records and certificates
- evaluation (if necessary, final evaluation) and conclusion for further events

## 1.5 Tips for preparing and planning a Service-Learning event<sup>28</sup>

The successful realisation of a Service-Learning event requires good preparation and planning. As with all projects, it is recommended to go through the essential steps of project management in Service-Learning and to prepare the assignment accordingly.

The following steps in project management can help:

- Define project: What should be done within the frame of the project?
- Set project goals: What are the sub goals of the project? - necessary steps until the successful completion of the project
- Assign tasks and clarify responsibilities: What tasks are required to achieve the sub goals and who is responsible for them?
- Step-by-step planning: Who does what until when?
- Identifying and dealing with risks: What are the potential risks and how can they be prevented?

Furthermore, the following questions can help in planning the Service-Learning event:

- What are the starting points for the Service-Learning idea? (integration into the university curriculum)
- What are the learning objectives of the Service-Learning event? (personal development and acquisition of social skills or predominantly professional skills?)

16 <sup>27</sup> In reference to: Sliwka (2014). <sup>28</sup> see „mehrwert“ – Agentur für Soziales Lernen (2018), p. 43 ff.

- Which form of Service-Learning is suitable? (subject-specific<sup>29</sup> or interdisciplinary<sup>30</sup>?)
- How can the event be scheduled? (weekly rotation or block event, etc.)
- How can a Service-Learning event be credited? (e.g. ECTS awarding equivalent to other seminars; as mandatory module and awarding of corresponding credit points; awarding of certificates and announcement of prizes/prize money for student commitment)
- What form of proof of performance is required? (e.g. project presentation/learning diary/homework on theory-practice comparison/evaluation of the degree of goal achievement of predefined success factors)
- Who can be convinced and how? (higher education/financial support/students/ /practice partners)

## 1.6 Convincing reasons for Service-Learning

Service-Learning offers many advantages and positive effects for all participants. The main reasons in favour of Service-Learning are summarised in the following table at a glance: <sup>31</sup>

Students	Universities	Environment/external partner
Positive effects on... - commitment to civil society - personality development leadership ability - project management - knowledge transfer - subject-theoretical learning - vocational orientation	Strengthening... - civil society responsibility - the exchange of knowledge between universities and their environment - the variety of seminars offered - the image of the university in society	Improvement... - of the quality and quantity of social offers and services - of the scientifically sound implementation - of monitoring and evaluation of projects in the community

**Figure 1** Reasons for Service-Learning

As an innovative form of teaching and learning, Service-Learning also offers universities an opportunity to perform a socially relevant function with the “Third Mission” in addition to traditional tasks such as research and teaching.

Social commitment is a cross-sectional task of the university and does not represent a pillar independent of research and teaching. “Especially in the course of the Bologna Process and the conversion to bachelor’s and master’s programmes, consideration should be given to a form of teaching/learning which

1. under the conditions of shortened bachelor’s and master’s programmes promotes a career orientation and personal development associated with the specialist programme and
2. helps to make use of the unused potential which students have for society in many areas.” <sup>32</sup>

University of Mannheim, Office of Studies and Teaching, Service-Learning Department

## 2. Students learn civic engagement - Service-Learning for nature and environmental protection in practice

In the following, selected examples from Croatia and Germany are presented providing an insight into the practical implementation of Service-Learning at universities. At the beginning the Service-Learning programme is listed which was realized in cooperation between the environmental Association Sunce and four faculties of the University of Split within the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students" (see chapter 2.1). This is followed by a Service-Learning project which was carried out in cooperation between the environmental Association Sunce and the Faculty of Economics at the University of Split on the subject of "Citizen participation and responsible management of natural resources" (see chapter 2.2). This chapter is finalized by the presentation of a Service-Learning example from Germany which was jointly realised by the Kiel Leibniz Institute for Science and Mathematics Education (IPN) of the Christian Albrechts University in Kiel (CAU) and the Flensburg Science Center Phaenomena on the subject of "Water and Consumption" (see chapter 2.3).

### 2.1 Service-Learning - Public events on sustainable waste management and sustainable tourism

This Service-Learning example shows how the environmental Association Sunce has implemented a Service-Learning programme in cooperation with four faculties of the University of Split as part of the above project. In addition to the thematic focus on nature and environmental protection, the interdisciplinary approach should also be emphasized. The Service-Learning programme was carried out with a group of students from the Faculty of Chemistry and Technology, the Faculty of Humanities and Social Sciences, the Faculty of Economics and the Department of Marine Research. The Service-Learning programme resulted in four public events held by the students on the topics of sustainable waste management and sustainable tourism with the aim of informing and raising the awareness of the population.

#### Background and objective

The mission of Sunce is an active nature and environmental protection based on the participation of the citizens. Within the framework of various projects, Sunce imparts knowledge, carries out educational work and pursues the goal of promoting environmentally friendly awareness and action in society. Here Sunce is dedicated to a wide variety of topics. Sustainable tourism and sustainable waste management are two topics that are currently of relevance in Split and its surroundings. Events where Sunce comes into direct contact and exchange with the public play an important role.

The aim of the Service-Learning programme was to introduce students to the field of communication and public relations as one of the fields of activity of the environmental Association Sunce and to offer them an opportunity to get to know and actively participate in the entire process of designing, organizing and conducting a public event. The aim was to impart practical knowledge, skills and competences to the students by dealing with the topics mentioned above and through active participation. Another goal was to motivate young people to commit themselves to the environment. Through their work, the students got to know the format of a public event as an approach to exchange with other people, to inform them and to promote an environmentally friendly awareness. The Service-Learning programme was aimed at promoting the assumption of responsibility, problem-solving competence, creativity and organisational and planning competence of students. In addition, the focus was on promoting communicative skills and competencies in dealing with the media and the ability to work in a team.

#### Concept of the Service-Learning programme - An overview

The Service-Learning programme started with a kick-off event. Four workshops followed, in which the students dealt with the topics of sustainable tourism and sustainable waste management, the planning and organisation of public events and media work. This was followed by a working phase in which two thematic groups were formed: One group was dedicated to planning and implementation of an event on sustainable tourism, the other group was dedicated to sustainable waste management. During this development phase, the students were able to take advantage of the "consultation hours" of the

participating employees of the environmental Association Sunce and receive support. Finally, the public event was conducted by the students at their faculty or in a public space in the city of Split. In the fifth and last workshop all participating students, teachers and educational staff of Sunce came together once again. In this context, the Service-Learning programme was finally reflected upon and evaluated. In addition, the participation and commitment of the students in the Service-Learning programme was solemnly acknowledged and the certificates were awarded to the students.



**Figure 2** Concept of the Service-Learning programme

The Service-Learning programme was conducted with two consecutive groups (groups A and B).<sup>33</sup> In each group, a small group was dedicated to sustainable tourism and another to sustainable waste management. The task of Group A was to design and conduct two interactive events for about 100 students. Group B, on the other hand, had the task of organising two public events for around 200 citizens. In the following description, however, no distinction will be made between the two groups until the 4th workshop, since the course and the content orientation are identical up to this point in time. Only the presentation of the public events and interactive activities carried out differentiates between groups A and B (see 2.1.3). A further overview of the structure of the Service-Learning programme can be found in Material 2.1.1.

In the following, the implementation of the Service-Learning programme is presented based on the four phases of Service-Learning: planning of the event, start of the event, course of the event and conclusion. More detailed information on the process, the challenges and possible solutions is given in chapter 3.

### 2.1.1 Planning the Service-Learning programme

The basic structure for the implementation of the Service-Learning programme was developed jointly by the environmental Association Sunce and the four faculties of the University of Split. This was based on the experience and knowledge gained during the study trip to Germany and the individual curricular starting points of the courses of the participating teachers.

#### Preliminary discussions and conceptual considerations

The basic idea for the implementation of the Service-Learning programme was to provide students with knowledge and tools necessary for the development and implementation of the public events step via connected workshops. Following the study trip in Germany, this approach was pursued and expanded in cooperation between the environmental Association Sunce and the participating faculties.

<sup>33</sup> The Service-Learning programme for the first group (A), consisting of eight students (two from each faculty), was conducted between November 2016 and March 2017. This was followed by the second group (B), also divided like the first and consisting of eight students, which carried out the project between March 2017 and June 2017.

For example, the faculties' wish for a practical design of the workshops could be realised by integrating excursions.

The curricular starting points were worked out in individual meetings by the environmental Association Sunce and the teachers of the participating faculties. Here Sunce compiled a list of environmental activities that are suitable for cooperation with students. This was examined by the teachers for relevance and possible links to the curriculum and used as a base for further planning of the Service-Learning programme.<sup>34</sup>

## Link to the curriculum

Based on the above-mentioned composition of the environmental Association Sunce, an individual curriculum connection plan was developed according to the needs and possibilities of the individual faculties.

In addition to different requirements for the link to the curriculum, another challenge was that this Service-Learning project was a pilot project and the participating faculties and teachers had no experience with Service-Learning so far. In addition, the funding from the German Federal Environmental Foundation set certain framework conditions such as the realisation of five workshops and the thematic orientation of the Service-Learning programme, which had to be considered during implementation. With much goodwill and commitment, however, the teachers involved were able to find individual solutions that made it possible to link the Service-Learning project to their courses, both in terms of learning content and learning objectives and the awarding of ECTS points.

A table showing the link to the curriculum lists the course name, the expected workload of the students, the specific learning objectives, the required credits and the ECTS points to be acquired can be found in material 2.1.2. For orientation, material 2.1.3 also provides an example calculation for awarding credit points at a Service-Learning event.

## Cooperation agreement between the environmental Association Sunce and the faculties

With the beginning of the cooperation between the environmental Association Sunce and the faculties an agreement was concluded (see material 2.1.4). The following points were set out: subject matter of the agreement, measures for implementation, duties of the Faculty, the environmental Association Sunce and the Sunce mentors, use of the results of the Service-Learning programme, duration of the agreement, dealing with breach of contract, conflicts and changes.

### 2.1.2 Start of the Service-Learning programme

#### Attracting students

An important step was to promote the Service-Learning programme to attract participants. For that, Sunce staff held information events at the four participating faculties one month earlier and presented the work of the civil society environmental organisation focusing on activities in the field of sustainable tourism and waste management. In addition, the framework of the Service-Learning programme was explained (duration, obligations of students, scope of work, participation in workshops, implementation of public events, reflection and evaluation of the programme). In addition, the participating teachers informed the students in their courses about the planned Service-Learning programme.

#### Kick-Off-Event

In addition to getting to know the participants (students, teachers and environmental Association Sunce) for the first time, the kick-off event focused on introducing into the course, contents and planned activities of the Service-Learning programme. Information was also provided on the obligations towards the University and the environmental Association Sunce and the expectations regarding commitment on the part of the students as well as the teachers and Sunce were questioned<sup>35</sup> and discussed. Group A students who had already taken part in a Service-Learning programme also shared their experiences with the participants.

20 <sup>34</sup> In this way, an overview of the curricular links between the activities of the environmental Association Sunce was compiled. Interested parties can request this list from the environmental Association Sunce. <sup>35</sup> Using the brainwriting method (see Material 2.1.5).

## Cooperation agreement between the environmental Association Sunce and the students

After the kick-off event, an agreement was made between Sunce and each individual student. The agreement set out the duration of the Service-Learning programme, the scope of the workload and reasons for premature termination of the cooperation. The students committed to participate in the workshop cycle (including interim reflection and final evaluation), to organise and conduct public events and to cooperate with the media (radio, television, newspapers, see material 2.1.6).

### 2.1.3 Course of the Service-Learning programme

The technical content of the Service-Learning programme was presented in the first three workshops. This was supplemented by thematic basics, which were taught according to the specific goals of the seminar at the university (see material 2.1.2). In the fourth workshop, the students worked in two thematic small groups, defined the content orientation and developed and planned the event. The fourth workshop was followed by the development phase in the existing groups. One group organised an event on sustainable tourism and the other group on sustainable waste management. This work phase was accompanied by the environmental Association Sunce through an intermediate reflection which was obligatory for the students as well as a weekly open consultation. The following table provides an overview of the successive workshops and activities over time.

Workshops/Activities	Extent	Appointments (group A - Winter semester)	Appointments (group B - Summer semester)
Kick-off event	1 Hour	11.11.2016	23.03.2017
Sustainable waste management - introduction	8 Hours	11.11.2016	24.03.2017
Sustainable tourism - introduction	8 Hours	11.11.2016	24.03.2017
Organisation of public events and work with the media	8 Hours	30.11.2016	07.04.2017
Planning of activities and events	4 Hours	09.12.2016	11.04.2017
Development phase	varying	20.12.2016 to 17.03.2017	02.05.2017 to 05.06.2017 or 08.06.2017
Interim reflection	2 Hours	13.02.2017	May 2017
Public events	10 Hours	17.03.2017	Sustainable waste man- agement 05.06.2017 Sustainable tourism 08.06.2017
Conclusion and reflection	2 Hours	20.03.2017.	22.09.2017

**Figure 3** Implementation of the Service-Learning programme (groups A and B)

## 1st workshop: Sustainable waste management - introduction

The aim of the first thematic workshop was to impart basic knowledge about responsible waste management and to give an insight into concrete examples on site. During the workshop and a visit to the various sites (see below), the students dealt with waste management problems in Split and the surrounding area. In teamwork, the students developed and discussed possible solutions (see material 2.1.7).

The Karepovac landfill was opened in 1964 and is located almost in the middle of Split. Continuous contamination of water, air and soil is to be complained about due to the lack of proper storage of the waste. The landfill also violates the principles of "reducing, reusing and recycling" of the sustainable waste management.



Figure 4 Karepovac landfill



Figure 5 Composting plant of the primary school Kamen Šine

In 2015, the primary school Kamen Šine participated in the educational programme of the environmental Association Sunce on composting. As part of the programme, a composting plant was developed and installed in the school. The subject of composting and the use and maintenance of the facility by the students is part of the curriculum. The aim is to contribute to the reduction of organic waste and to raising awareness.

Unija papir is one of the leading waste paper recycling companies in Croatia. The company focuses primarily on the recycling of paper packaging from shopping centres and processes the paper disposed of by citizens in containers of the "Green Islands". In addition, in some buildings waste paper is collected in a cardboard box (originally initiated by Sunce in 2001), which is collected and processed by various small companies. Although the share of waste paper collected is highest in Split compared to other types of waste, it is still at a very low level in households.



Figure 6 Recovered paper recycling company Unija papir

## 2nd workshop: Sustainable tourism - introduction

The aim of the second thematic workshop was to impart basic knowledge about sustainable tourism to the participants. The characteristics, significance and concept of sustainable tourism were explained. Using practical examples such as the "green" Hotel Split (in Podstrana), the students got to know sustainable tourism measures first-hand. The students were also able to deal with essential aspects of sustainable tourism in the surroundings of Omiš and Cetina. In this context they identified problems of unsustainable tourism and developed proposals for solutions (see material 2.1.8).

Hotel Split is one of the first "green" hotels in Croatia. It was built according to the principles of ecological and green building. The hotel has its own solar power plant and renewable energy sources for heating and cooling. In addition, it has a rainwater collection tank, central control of air conditioning, ventilation and lighting as well as a heat recovery system. Waste bins for recycled products are located in suitable places in the hotel, all cleaning products are biodegradable, hygiene products are pH-neutral and eco-certified. The hotel's lighting technology is energy-saving and ecological and recycled materials are used in the daily operation.

Croatia. It was built according to the principles of



Figure 7 Visit to the "green" Hotel Split (in Podstrana)

The Leopold Mandić nature trail is the first nature trail open to the public in the Omiš area. It is in the important landscape area "Canyon Cetina", is designed as a circular path and combines the natural and cultural characteristics of this part of the canyon. The nature trail serves to inform and educate visitors to Omiš and the protected area "Canyon Cetina". It is part of the former "vital line" of this region - a path over the cliffs of Mosor, which connected the inhabitants of Gornja Poljica with other settlements.



Figure 8 Nature trail Leopold Mandić

Cetina Canyon has had the status of one of the most beautiful natural attractions in Central Dalmatia since 1963. The area stretches from the mouth of the Cetina river in Omiš to Tisne stine, about eight kilometres upstream. In recent years the town of Omiš has developed into an important centre of adventure tourism and extreme sports due to the natural characteristics of the canyon. The canyon is an ideal place for active tourism and offers possibilities for rafting, canyoning and climbing. In recent years, the negative impacts on the river's ecosystem have increased due to the large number of tourists' activities.



Figure 9 Cetina Canyon

### 3rd workshop: Organisation of public events and work with media

The third workshop provided basic knowledge and skills for organising and conducting public events and working with the media. The workshop was led by a media expert. The students worked in groups and got to know methods such as brainstorming and storytelling and dealt with the importance of non-verbal communication. In addition, the national TV station visited the workshop and interviewed the students about their project in order to report about it on television. This enabled students to gain direct experience in dealing with the media during the workshop and to prepare for the upcoming media work within the framework of public events (see material 2.1.9).



Figure 10 Visit of national television

### 4th workshop: Planning of activities and events

The aim of the fourth workshop was to develop a concept for the implementation of events on the topics of sustainable waste management and sustainable tourism. The students were guided by the framework conditions set by the environmental Association Sunce for the implementation of the events and by their own ideas developed in the workshops. In the first step they identified an (environmental) problem in tourism or waste management they wanted to deal with. Then they formed two groups according to their thematic preferences and worked out the goal and the contents of the public event. In addition to the content and timing of the event, the concept also included making a budget plan to calculate the costs for the event. (see material 2.1.10).

The students of the first round (group A) developed a concept for the organisation and implementation of interactive events for 100 students. The task of the students of the second round (Group B) was to design public events for 200 citizens.<sup>36</sup> Material 2.1.1 provides a schematic representation of the project's requirements for the implementation of the Service-Learning programme and the parts designed by the students.

### Reflection on the Service-Learning project

The experiences and learned skills were processed and evaluated by a guided reflection. In addition, the students kept a learning diary and an intermediate reflection was conducted. In addition, an optional "consultation hour" with the environmental Association Sunce was offered for students and an "accompanying consultation" for teachers.

### Reflection with learning diary

In order to document their own learning process and competence acquisition, the students created a learning diary, which they kept throughout the entire Service-Learning programme from the beginning of the first workshop to its conclusion. The learning diary supported the students in their differentiated examination of their own learning. Above all, it should serve to observe and record in process and one's own dealing with the topic of the Service-Learning project. (see material 2.1.13)

### Interim reflection

The interim reflection was conducted between the fourth and fifth workshops as part of the development phase for the organization of public events. The aim of the reflection was to discuss the current work status and to identify possible problems or requirements. Here the students presented the current course and status of their work and answered questions in small groups to reflect on the progress to

24 <sup>36</sup> The students were divided into an interdisciplinary working group consisting of students from the Faculty of Humanities and Social Sciences and the Faculty of Chemistry and Technology (a total of four students) and a working group consisting of students from the Faculty of Economics and the University of Marine Sciences (a total of four students).

date and the need for support (see material 2.1.14).

### Consultation hours for students

During the development phase, each group of students had a Sunce employee at their disposal who supported them in organizing the events. The consultation hours were carried out as required for the individual groups.

### Accompanying advice for teachers

For faculty teachers Sunce offered an "accompanying advice". This was aimed at those teachers who were unable to participate in Sunce's workshops. After the four workshops, all Sunce teachers received a report outlining the activities carried out and including a short evaluation. Based on this, the teachers had the opportunity to give feedback or suggestions for improvement.

## 2.1.4 Implementation of the Service-Learning events

The highlight of the Service-Learning programme was the execution of the four public events conceived and planned by the students at the participating faculties of the university and in the city of Split:

### Interactive events at the University of Split

#### Forum "Sustainable tourism an opportunity - not a utopia!" at the Faculty of Economic Sciences

With reference to the UN year 2017 for sustainable tourism, four students of the Faculty of Economics and the Department of Marine Studies organised an open forum for students of the University of Split on the topic "Promotion of sustainable tourism". To this end, they invited four experts who examined the topic from different perspectives. After an introductory presentation by Sunce on the importance and relevance of sustainable tourism, the managing director of the Hotel Split, (Podstrana) presented how sustainability aspects are put into practice at his eco-hotel. Conversely, the lecture by a professor of the Faculty of Economic Sciences dealt with the effects of non-sustainable tourism at the local level. Finally, an employee of the environmental Association Sunce presented the "Dalmatia Green"<sup>37</sup> certification programme, an implementation tool for promoting environmentally conscious management in small tourism facilities. Building on the four presentations, the participants discussed the impact of tourism in small groups (such as cruises, gastronomy, large festivals, active tourism and holiday homes) on a) the local community, b) tourists and c) nature and environment. The results of the group work were presented in the plenum and possible solutions were discussed.



Figure 11 Group work within the Forum

#### "Green Islands" at the Faculty of Chemistry and Technology

Four students from the Faculty of Humanities and Social Sciences as well as the Faculty of Chemistry and Technology dealt with the topic of waste separation. They developed a waste separation system and set up two "Green Islands" for separating plastic, paper and cardboard as well as organic waste and residual waste in the Faculty of Chemistry and Technology. As part of the public event, which was aimed at students and teachers of both faculties, the students of the Faculty of Chemistry and Technology presented their project on waste separation. They gave a presentation on the causes and effects of the waste problem and the possibilities for sustainable action. As a practical example of waste separation, they demonstrated their "Green Islands" at the Faculty. In a second part of the public event, students of

<sup>37</sup> See: <http://dalmatia-green.com/> (website for tourists) or <http://dalmatia-green.hr/> (information for tourism facilities).

the humanities and social sciences held a workshop for primary school children. In a short lecture, they explained the waste problem and possible action-oriented approaches to solutions, followed by a playful discussion with the children using educational games on the subject of waste and waste separation. In addition, the children made objects of art from waste, which were later exhibited at the Faculty of Chemistry and Technology. Finally, an eco-quiz on waste was played and the winning class received an award.



**Figure 12** Workshop for primary school pupils at the public event

The public events in the Faculty of Economics and the Faculty of Chemistry and Technology were held on the same day. At the end of the events, all participating students, Sunce staff and teachers gathered for a final round, to which the local media were also invited. They conducted interviews with Sunce students and staff. An encouraging result were the reports on local television and radio. In addition, the students published information about the events on Sunce's website and Facebook page.

## Public events on Environment Day

### "Educational café with homemade regional specialities" in the city library

A group of students from the Faculty of Economics and the Department of Oceanography held an educational café on sustainable tourism at the "Marko Marulić" municipal library in Split on International Environment Day. Both the citizens of the city and students were invited. The event informed about approaches and possibilities of sustainable tourism in the city of Split, which lives from tourism. In the first part, the students reported on the goals and contents of their Service-Learning project. Based on this, the managing director of Biokovo Nature Park illustrated the problems and challenges of mass tourism and the park's initiatives for sustainable tourism. In addition, the managing director of the "green" hotel Split presented exemplary measures of a sustainable hotel. Afterwards, the participants discussed sustainable tourism and possible initiatives of the city of Split to reduce or avoid negative impacts of tourism on nature and environment. To round off the event, all participants were invited to enjoy the traditional regional specialities made by the students themselves.



**Figure 13** Presentation during the public event

### "Plastic Detox" campaign on the Riva promenade in Split

The group of students from the Faculty of Chemistry and Technology and the Faculty of Humanities and Social Sciences was dealing with the excessive use of plastic bags in everyday life. With the aim of promoting sustainable waste management and reducing the consumption of harmful plastics, the students held a public event titled "Plastic Detox" on the Split city promenade on International Day of the Environment. The citizens could inform themselves about the topic and had the possibility to paint a linen bag and take it home. On the bag there was a tag designed by students with facts and figures about the waste of plastic and information about the impact of plastic on health, nature and the environment. In addition, citizens had the opportunity to take part in a survey on waste separation in

Split and the surrounding area. The results of the survey served the further work of the environmental Association Sunce.

The two public events were also accompanied by extensive press and public relations work. Both events were reported about and advertised in the local media in advance. Local television was present both in the education café and during the "Plastic Detox" campaign. For example, a local TV station reported live on "Plastic Detox", presented the idea of Service-Learning in cooperation between the environmental Association Sunce and the University of Split and interviewed the students about their commitment. Information about the events was also published on Sunce's website and Facebook page.



**Figure 14** Interview by national television HRT at the public event

### 2.1.5 Completion of the Service-Learning programme

The completion of the Service-Learning programme was celebrated together with all participants: students, teachers and educational staff of Sunce. At the beginning, a Sunce employee reviewed the four workshops held with the students based on an illustrated presentation and informed about the interim reflection and accompanying consultation hours. Based on this, the students presented their public events as a result of the Service-Learning programme. After the subsequent reflection and evaluation of the Service-Learning programme (see below), the commitment project was completed (see material 2.1.15). In a festive ceremony, the students were given a certificate highlighting their special commitment to the Service-Learning programme (see material 2.1.11).<sup>38</sup>

#### Reflection and evaluation

The reflection was integrated into the final workshop and served to finally process and evaluate the experiences and acquired knowledge and skills. After the students had worked on the final questions for themselves in their personal learning diary (see material 2.1.13), they were dealing with the reflection questions on their learning process, initially in individual work, and then communicated the results to the plenum. This was followed by a second round of reflection on the implementation of the Service-Learning programme (see material 2.1.16). The faculty teachers and the educational staff of Sunce also took part in this round of reflection. The results were then presented and discussed in plenum. A final evaluation of the implementation process was carried out using a target group-specific questionnaire for students and teachers (see material 1.2 and 1.3).



**Figure 15** Students with their Service-Learning programme certificates

<sup>38</sup> The teachers also received a certificate from the environmental Association Sunce (see material 2.1.12) as a follow-up to the Service-Learning programme.

## 2.2 Service-Learning - Citizen participation in responsible management of natural resources

The Service-Learning programme "Citizen participation in responsible management of natural resources" was carried out as part of the project "Responsible for nature"<sup>39</sup> in cooperation between the Faculty of Economics at the University of Split and the environmental Association Sunce in the academic years 2015/2016 and 2016/2017. The results are a contribution to a report by Sunce on access to information on the websites of Croatian protected area administrations and a contribution to a statistical evaluation by Sunce on public participation in environmental impact assessments at local level. In addition, the students planned two integrated communication strategies for the Marjan Forest Park.

### Background and objective

The aim of the "Responsible for nature"<sup>40</sup> project, which implemented the Service-Learning programme, was to promote transparency and efficiency in the management of natural resources in Croatia. Activities in the areas of research, advocacy for transparent administration and public participation in nature conservation, public relations work and educational programmes on the transparency and efficiency of natural resource management were carried out. The project focused on protected areas in Croatia and on institutions responsible for the management of these protected areas. Special attention was given to Marjan Forest Park, one of the most valuable natural resources in Split, so that several project activities were devoted to the Forest Park.

The main objective of the Service-Learning programme "Citizen participation in responsible management of natural resources" was to promote the participation of young people in the control of the management of public goods and natural resources. The Faculty of Economics and the environmental Association Sunce aimed to apply a methodical-didactic form of learning with Service-Learning, which enables students a practical commitment and interdisciplinary work in connection with the curriculum. The aim of the project was to make students aware of the right of access to information and the importance of transparent administration and efficient management of natural resources.<sup>41</sup> They were given the opportunity to acquire knowledge and skills, to reflect on the way local authorities deal with freedom of information and transparency and to form their own opinions through the practical activities to which they devoted themselves. All activities aimed to motivate students to actively participate in environmental and nature conservation and to promote their civic commitment.

### Concept of the Service-Learning programme - An overview

Within the framework of the Service-Learning programme "Citizen participation in responsible management of natural resources", the students had the opportunity to participate in the activities of the environmental Association Sunce in the project "Responsible for nature", to apply their theoretical knowledge and to gain experience in interdisciplinary teamwork.

The programme was carried out in two consecutive semesters in connection with the courses "Environmental economics", "Marketing communication" and "Marketing management" as well as in an internship.<sup>42</sup> The field of activity of the students differed depending on the course and the corresponding content orientation of the activities. For example, one group of students worked in the office of the environmental Association Sunce on analysis of the activities, while two other groups of students were involved in the Marjan Forest Park (see 2.2.3).

However, the following contents of the Service-Learning programme were the same for all students:

<sup>39</sup> The two-year project "Responsible for nature" was launched on 11 November 2015 in cooperation with the environmental Association Sunce, BIOM, the Marjan Association and the Faculty of Economics at the University of Split, in collaboration with the Faculty of Law. The project was funded from EU funds and by the National Office for Non-Governmental Organisations under the EU's IPA 2012 programme for strengthening local partnerships for transparent management and fighting corruption in the responsible use of natural resources. <sup>40</sup> Public goods such as protected areas are highly endangered by economic and industrial interests in Croatia. NGOs try to control the administrations of these public goods to counteract this problem. <sup>41</sup> The international legal framework for public participation in environmental and nature conservation is the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. See [www.unece.org/env/pp/welcome.html](http://www.unece.org/env/pp/welcome.html) (19.03.2018). <sup>42</sup> In the academic year 2015/2016, one group (three students) participated in the course "Environmental economics" and one group (three students) in the courses "Marketing communication" and "Marketing management". In the academic year 2016/2017, one group (five students) took part in the courses "Marketing communication" and "Marketing management" as well as one student in the context of the professional internship.

- introductory event: introduction to the objectives, the course and the specific contents of the Service-Learning programme,
- provision of relevant project material for carrying out the activities.
- accompanying advice during the implementation of the activities, including individual reflection with the students.
- final event: evaluation of the programme, award of certificates and recognition of participation in the programme.

## 2.2.1 Planning the Service-Learning programme

The structure for the implementation of the Service-Learning programme was developed in cooperation between the environmental Association Sunce and the participating teachers of the Faculty of Economics, considering the relevant project activities in which the students participated as well as the curricular starting points of the courses.

### Preliminary discussions and conceptual considerations

The basic idea of the Service-Learning programme "Citizen participation in responsible management of natural resources" was to involve the students in the project "Responsible for nature" of the environmental Association Sunce. By participating in the programme, they could intensively deal with the goals and contents of project of the environmental Association Sunce and participate in the implementation of the project contents. Before the beginning of the semester of the current academic year, the project team of the environmental Association Sunce therefore put together possible project activities in which the students could participate during the semester. Together with the teachers, possible activities for the integration of the students were then discussed, taking into account the curricular starting points of their courses. Tasks and the time frame for their implementation were then planned within the framework of the semester.

### Link to the curriculum

Based on the project activities of the environmental Association Sunce, the teachers developed an individual plan to link the Service-Learning programme to the curriculum with a view to the needs and possibilities of their courses. A tabular list can be taken from material 2.2.1. This lists the course name, the expected workload for the students, the specific learning objectives, the required credits and the ECTS points to be earned.

### Cooperation agreement between the environmental Association Sunce and the Faculty of Economic Sciences

With the beginning of the cooperation between the environmental Association Sunce and the Faculty of Economics of the University in Split, an agreement was concluded to implement the Service-Learning programme within the framework of the "Responsible for nature" project. The duties of the faculty, the environmental Association Sunce and Sunce mentors, the use of the results of the Service-Learning program, the duration of the agreement as well as the dealing with breaches of contract, conflicts and changes were recorded here.<sup>43</sup>

<sup>43</sup> An exemplary cooperation agreement can be found in material 2.1.4 in chapter 2.1.

## 2.2.2 Start of the Service-Learning programme

### Attracting students

Promoting the Service-Learning programme to attract students was an important first step. During the semester, employees of the environmental Association Sunce held information events at the Faculty of Economics. They presented the work of the environmental Association Sunce and the project "Responsible for nature" with a special focus on the goals and contents of the activities in which the students could participate. The information events emphasized the importance of active civic involvement in nature conservation and environmental protection. In addition, the participating teachers informed the students in their courses about the planned Service-Learning programme. An additional application for the programme was submitted by students who had already taken part in the programme in the previous semester. They presented their work results and experiences with Service-Learning to other students and teachers.

### Introductory session

An individual introductory meeting was held with each group of students who participated in the activities of the "Responsible for nature" project as part of the Service-Learning programme "Citizen participation in responsible management of natural resources". In addition to getting to know the participants (students and project team of the environmental Association Sunce) for the first time, the students were introduced to the contents, goals and background of the "Responsible for nature" project. In addition, the activities planned by the students as part of the commitment were discussed in detail. The students were also informed about the obligations of the faculty and the environmental Association Sunce as project partner as well as about the duration of their engagement project.

### Cooperation agreement between the environmental Association Sunce and the students

After the introductory event, an agreement was made between the environmental Association Sunce and each individual student. Here the rights and duties of the students and Sunce, the activities in which the students participate, the duration of the Service-Learning programme, the name of Sunce's mentor and the use of the results were set.<sup>44</sup>

## 2.2.3 Course of the Service-Learning programme

After the group-specific introductory event at the beginning of the Service-Learning programme, during which the students dealt with the basic content of their activities, they started their commitment project according to their individual tasks. Depending on the task at hand, students were provided with materials that were developed in the "Responsibility for nature" project. These materials included:

- status report on Marjan Forest Park by an independent expert on forestry,
- service evaluation of the Marjan Forest Park ecosystem by a professor of the Faculty of Forest Sciences in Zagreb,
- survey of the citizens of Split about the condition and the appreciation of the Marjan Forest Park.

## Service assessment of the Marjan Forest Park ecosystem

Ecosystem services are processes and conditions through which ecosystems create direct and indirect benefits for life on Earth. In order to integrate the value into economic calculations, the services are converted into monetary units. The services of the Marjan Forest Park have been evaluated as it is the most valuable natural resource in Split. According to a study <sup>45</sup>, the following services of the forest park were identified as important or very important: the forest park produces oxygen, creates clean and fresh air, offers natural space for recreation, holidays and educational activities and protects against erosion. The study points to the value of the Marjan Forest Park and its diverse services, as these are usually not considered when decisions are made that endanger the forest park (e.g. urban development measures).

During the entire Service-Learning programme, students had the opportunity to get support from Sunce's mentors, either directly in Sunce's office, by phone or by e-mail.

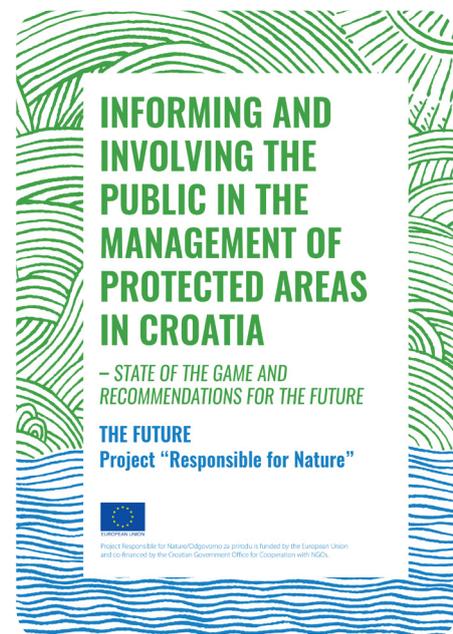
Within the framework of the Service-Learning programme, the students participated in one of the following project activities with a workload of 30 hours:

- analysis of the current state of information and public participation in the management of protected areas in Croatia,
- analysis of public participation in environmental impact assessments at local level,
- development of a communication concept to optimize the management of the Marjan Forest Park.

According to the content and requirements of the course, during which the students participated in the Service-Learning programme, the commitment in the environmental Association Sunce was as described below:

### Analysis of the current state of information and public participation in the management of protected areas in Croatia:

A group of three students analysed the current state of information and public participation in the administration of protected areas. Here they used a checklist to examine the websites of all protected area administrations in Croatia. They checked whether these websites had official documents and information available to citizens, evaluated access to them and assessed their clarity and transparency. The group summarised the results in a report providing access to information for an average citizen. In addition, the results were included in the report written by the environmental Association Sunce "Public participation in the management of protected areas in Croatia - status and recommendations for the future". The students were also able to contribute to the optimization of the form through their experience in applying the checklist. Finally, the students presented the results of their Service-Learning commitment to their fellow students in their course.



**Figure 16** Report "Public participation in the management of protected areas in Croatia - status and recommendations for the future"

<sup>45</sup> see [http://sunce-st.org/wp-content/uploads/2018/02/Assessment\\_forest-ecosystem-services.pdf](http://sunce-st.org/wp-content/uploads/2018/02/Assessment_forest-ecosystem-services.pdf) (19.03.2018).

## Analysis of public participation in environmental impact assessments at local level:

One female student participated in the statistical evaluation of the results of the above analysis and the analysis of the implementation of public participation legislation in environmental impact assessments at local level. The results were presented in a presentation at the seminar "Public participation in environmental processes" held by the environmental Association Sunce in Zagreb. The student participated in the organization and realisation of the seminar.



**Figure 17** Seminar "Public participation in environmental processes"

## Development of a communication concept to optimize the management of the Marjan Forest Park:

Two groups of students (a total of eight students in the academic year 2015/2016 and 2016/2017) each planned an integrated communication strategy for the Marjan Forest Park as part of the Service-Learning programme. Individual elements of this work were used in the development of a communication concept and an advertising campaign of the environmental Association Sunce as part of the "Responsible for nature" project to optimise the management of the Marjan Forest Park. The slogan "Marjan Forest Park - for body and soul" developed by the students was incorporated, for example, in brochures, posters and advertising videos of the Marjan Forest Park advertising campaign. In addition, further contents of the work created by the students



**Figure 18** Exhibition as part of the "Marjan Forest Park - for body and soul" campaign

are to be used in future projects and activities around the Marjan Forest Park.

## Reflection on the Service-Learning project

No guided reflection in the form of a learning diary or interim reflection was conducted as part of this Service-Learning programme. However, accompanying advice was offered by the environmental Association Sunce. The students, who worked in the office of Sunce, had the opportunity to talk directly with the mentor and the project team about problems and challenges that arose. Students who were involved in project activities carried out abroad could contact their mentors by e-mail and get advice. The discussions were also used to reflect informally on the participation in the Service-Learning programme. They took place according to the needs of the students.

## 2.2.5 Completion of the Service-Learning programme

The completion of the Service-Learning programme was celebrated twice: in February 2017 for students who participated in the 2015/2016 academic year and in October 2017 for students who participated in the 2016/2017 academic year. Both events took place in the Faculty of Economics. The final event was attended not only by the students but also by the teachers involved in the programme, the educational staff, the project manager of the environmental Association Sunce and the Vice-Dean of the Faculty of Economics. Based on an illustrated presentation, the project manager looked back on the activities of the students within the framework of the Service-Learning programme and emphasised in particular the achievements of the students. The Service-Learning programme was evaluated by the students based on an evaluation form.<sup>46</sup> In the celebration the students received a certificate highlighting their commitment to the Service-Learning programme "Citizen participation in responsible management of natural resources" as part of the "Responsibility for nature" project.



Figure 19 Final event of the Service-Learning programme

## 2.3 Service-Learning - Media imparting of sustainability knowledge on the subject of water and consumption<sup>47</sup>

At the Leibniz Institute for Science and Mathematics Education (IPN)<sup>48</sup> of the Christian-Albrechts-University of Kiel (CAU) in Kiel, in cooperation with the Flensburg Science Center Phaenomena<sup>49</sup>, a Service-Learning project on the topic of "water and consumption" was implemented, in which prospective biology teachers dealt with the media mediation of Education for Sustainable Development (ESD) for young people. The concrete result is an audio podcast series<sup>50</sup> for the exhibition "Ich sehe Was(ser), was du nicht siehst - Virtuelles Wasser begreifen" ("I see some (thing/water) you don't see - Understanding virtual water")<sup>51</sup> in the Flensburg Phaenomena.

### Background and objectives

The course at the IPN aimed to impart professional and didactic knowledge as well as commitment and interest for ESD to students of the biology teaching profession by dealing with ESD and Service-Learning. Through the Service-Learning project in cooperation with the Flensburg Science Center Phaenomena and with the exhibition director, the students' teachers gained experience in communicating sustainability knowledge in the media with pupils from the seventh grade of the Goethe School in Flensburg. The Service-Learning project also contributed to the UNESCO World Action Programme Education for Sustainable Development (ESD), because the students' teachers were addressed as actors who make a concrete and practical contribution to the educational agendas of the pupils. Students' teachers were supported in their role as ESD multipliers.



Figure 20 Spirit level - Meat consumption is always also water consumption<sup>52</sup>

<sup>46</sup> An exemplary evaluation sheet can be found in material 1.2. of chapter 1. <sup>47</sup> source: [www.einfachgutelehre.uni-kiel.de/allgemein/nachhaltigkeit-vermitteln-lernen](http://www.einfachgutelehre.uni-kiel.de/allgemein/nachhaltigkeit-vermitteln-lernen) (19.03.2018). If you have any questions about the Service Learning project, please contact Prof. Dr. Kirsten Kremer ([kremer@ipn.uni-kiel.de](mailto:kremer@ipn.uni-kiel.de)). <sup>48</sup> see [www.ipn.uni-kiel.de](http://www.ipn.uni-kiel.de) (19.03.2018). <sup>49</sup> The Phaenomena is a science centre that is aimed in particular at children and young people and makes scientific and technical education tangible through various stations and experiments. See [www.phaenomena-flensburg.de](http://www.phaenomena-flensburg.de) (19.03.2018). <sup>50</sup> An audio podcast is an audio recording that is made available on the Internet and can be downloaded or listened to online. The word "podcast" is composed of the terms "iPod" and "broadcast". <sup>51</sup> The exhibition was developed in the Mathematikum Gießen in cooperation with the IPN and accompanied scientifically by Prof. Dr. Kerstin Kremer regarding the content and methodological-didactic design. <sup>52</sup> To produce one kilogram of beef, 15,400 litres of water are evaporated, consumed or polluted on a global average.

"Water and consumption" was at the heart of the measure: direct daily water consumption in Germany currently averages 120 litres per capita. However, this figure is not enough to express the actual average water consumption caused by lifestyle. This also includes water that evaporates, is consumed or is polluted during the production of the products consumed. Considering these considerably larger quantities of so-called "virtual water", daily per capita consumption averages 3900 litres of water. In addition, in our globalised world it can no longer be assumed that the water consumed in the production process of a product comes from Germany. Statistically, 69% of German water consumption takes place abroad, often in countries where water is scarce.<sup>53</sup> The project focuses on the topic of "water and consumption", a social challenge of sustainable development in relation to the actions of the individual.

## Concept of the Service-Learning project

The seminar was divided into three sub-steps. The first step was an instructor-controlled introduction to the concepts of "virtual water" and water footprint. This was followed by a student-centred project phase in which the students wrote a script for the podcast based on the clarification of the subject matter. The podcasts represented a common medium for students to point out the contents of the exhibition "I see some (thing/water) you don't see - Understanding virtual water". The third seminar phase was the student-centred preparation, implementation and reflection of a Service-Learning day in the Flensburg Phaenomenta (see item 2.3.3).

### 2.3.1 Planning Service-Learning activity

The planning of the activity was initiated by the PerLe<sup>54</sup> Fund for Teaching Innovation, which financially and ideally supports best practice examples for innovative and future-oriented teaching formats at the Christian-Albrechts-University of Kiel (CAU). The fund also specifically supports projects in the field of Service-Learning and Education for Sustainable Development and enables project participants an exchange via workshop offers and a day of teaching at the university.

### Preliminary discussions and conceptual considerations

The initiative for the implementation of the Service-Learning project came from the Didactics of Biology at the Leibniz Institute for Science and Mathematics Education (IPN) by Prof. Dr. Kerstin Kremer. Contact was established during the application process for the PerLe project. The Service-Learning event in the Flensburg Phaenomenta was planned together with the exhibition management of the Phaenomenta and integrated into a course for Master students of biology at the IPN.

### Link to the curriculum

The Service-Learning project was carried out as part of the course "Theoretical foundation, design and reflection of subject-specific teaching/learning processes in biology teaching" with a workload of two semester hours per week. As proof of achievement, the students created a portfolio to reflect on what they had learned. Two ECTS-points were awarded.

### Agreements between the external partner organization and the university

The arrangements for holding the Service-Learning event were agreed between the Service-Learning partners, but not stipulated in the contract. PerLe's support for the development was recorded in a funding announcement and was linked to the presentation of the project on the Gute Lehre (Good Teaching) blog<sup>55</sup> and a poster presentation on Teaching Day at the Christian-Albrechts University in Kiel.

34 <sup>53</sup> Hoekstra/Mekonnen (2012), p. 3232ff. <sup>54</sup> PerLe (Project for Successful Teaching and Learning) is a project of the Christian-Albrechts University of Kiel, which is funded by the Federal Ministry of Education and Research within the framework of the Quality Pact for Teaching from 2012-2016 and 2017-2020 and enables the university to improve the quality of teaching and further expand support services for students. <sup>55</sup> see [www.einfachgutelehre.uni-kiel.de/good-practice/service-learning/](http://www.einfachgutelehre.uni-kiel.de/good-practice/service-learning/) (04.09.2017).

## 2.3.2 Start of the Service-Learning event

### Attracting students

The course was an optional compulsory course for the students within the framework of the master curriculum in didactics of biology.

### Launch event

The information about the requirements of the seminar, the distribution of tasks, appointments, reflection and evaluation were discussed with the students in the first seminar session.

### Target agreements between students and partner organisation

The seminar and the Service-Learning day were integrated content of the course at the IPN. There was no additional target agreement between the Flensburg Science Center and the students of the University of Kiel beyond the course.

## 2.3.3 Progress of the Service-Learning project

As part of the weekly face-to-face sessions of the university seminar, an introduction to the content, the development of the audio podcast and the planning of the Service-Learning event in the Phaenomena took place. The Service-Learning event in the Phaenomena was then held as a block date within the seminar as part of a presence day.

### Introduction to the concepts "virtual water" and water footprint

The students were divided into groups and worked scientifically into the use of water in the production of a consumer product (coffee, roses/cut flowers, paper, cotton, tomatoes, meat). During the seminar, the following sessions dealt with knowledge transfer and motivation for action through ESD from a didactic perspective, followed by the focus on knowledge transfer in museums as well as podcasts and media in knowledge transfer with the introduction to the Audacity software programme.

### Creation of podcasts

Based on the clarification of the subject, the students wrote a screenplay for the podcast, which conveys knowledge of action and effectiveness as closely as possible to everyday life. Six different podcasts on the topics of coffee, rose, cotton, paper, tomato, meat were created in teamwork.<sup>56</sup> The podcast on cotton deals, for example, with cotton as a raw material for the clothing industry, cultivation in distant and often arid countries and the ecological needs of the cotton plant and thus provides suggestions for sustainable purchasing of clothing. In the podcast on meat, for example, water consumption in meat production is linked to the topic of nutrition and background information is provided in a table conversation during ordering in a restaurant. The listener learns, for example, why beef, unlike other meats, has the highest water footprint and what water balance the vegetarian soy alternative has (see QR codes on poster/photo).



**Figure 21** Podcast poster with QR code<sup>57</sup> on the topics "Coffee, rose, cotton, paper, tomato, meat

<sup>56</sup> The podcasts can be found at: [www.einfachgutelehre.uni-kiel.de/allgemein/nachhaltigkeit-vermitteln-lernen/](http://www.einfachgutelehre.uni-kiel.de/allgemein/nachhaltigkeit-vermitteln-lernen/) (04.09.2017). <sup>58</sup> QR codes are read out with the smart phone and lead directly to information, e.g. on Internet pages. 35

## Preparation of the rally

The students developed a rally for the learning group, which integrates the podcasts into the special exhibition "I see some (thing/water) you don't see - Understanding virtual water". In the foreground of the methodical-didactic orientation was the claim to focus on the experiential learning of the pupils and to keep in mind the potential for a subsequent preparation in class. Not the knowledge survey, but the personal interest of the pupils should be focused during the design of the rally. The exhibition director of the Phaenomena advised the students with his experience in the operation and design of exhibitions.

## Service-Learning day

The Service-Learning day in Flensburg was coordinated in cooperation with the exhibition director of the Phaenomena. The invited pupils of the Goethe School in Flensburg worked out the stations of the hands-on exhibition as well as the podcasts on coffee, roses/cut flowers, paper, cotton, tomatoes and meat designed for the product stations. This was followed by a phase of feedback for the pupils on the nature of the request of the podcasts. Afterwards, the students reflected with the pupils on the stations of the exhibition and placed them in a meaningful relation to the everyday life of the seventh-graders.



Figure 22 Rally station "Coffee/Cocoa"



Figure 23 Rally station "Cotton"

## Reflection on Service-Learning activity

The Service-Learning activity was discussed with the students after the project day and in the seminar, and evaluated according to the criteria defined. As part of a learning portfolio, the students summarized their expectations and experiences with the project day and their role once again in writing. Education for Sustainable Development was considered an important element of the biology teacher training programme, which should be given even more scope. In this context, the independent creative examination of the subject was attributed a high motivating effect. The experience of "Service-Learning" with the students in Phaenomena was perceived as a unique learning opportunity in teacher training.

### 2.3.4 Completion of the Service-Learning project

At the end of the Service-Learning project, the students received a certificate of achievement and took part in the final evaluation of the teaching project. In addition, the teaching project was presented by the students at the CAU Teaching Day. A continuation of the project was developed with a view to a film project. The film project was then implemented in an interdisciplinary seminar for future teachers in the summer semester 2017 in the form of a short film on the topic of "virtual water".<sup>58</sup>

36 <sup>58</sup> Documentation of the film project can be found in CAU's university magazine "Unizeit" at: [www.uni-kiel.de/unizeit/index.php?bid=911102](http://www.uni-kiel.de/unizeit/index.php?bid=911102) (11.04.2018).

### 3. Challenges and solutions - Tips from the practice of the Service-Learning programme between the environmental Association Sunce and the faculties of the University of Split

The implementation of the Service-Learning programme in cooperation between the environmental Association Sunce and the participating faculties confirmed the many advantages of Service-Learning: through their practical commitment, for example, the students contributed to raising awareness of environmental problems in the local community and the cooperation between the university and the non-profit environmental Association Sunce led to greater involvement of environmental education in the formal educational process of the partner faculties. In addition, the cooperation initiated by the environmental Association Sunce promoted an interdisciplinary approach to solving environmental problems and the networking of students and lecturers from the participating faculties.

*Service-Learning is an excellent method for integrating practical learning into the curriculum. Service-Learning gives students the opportunity to participate in real life..*

*Zvezdana Popović Perković, Ph.D., Department of Marine Research, University of Split*

However, challenges were identified in all phases of the implementation of the Service-Learning programme for which solutions were found and implemented. The challenges included, for example, the design and implementation of the Service-Learning programme, the coordination of courses in accordance with the activities of the environmental Association Sunce, the performance evaluation of students, the awarding of ECTS-points within the framework of the Service-Learning seminar, the assumption of responsibility by students as well as the motivation of students and communication between partner organisations.

*For me, Service-Learning means a new approach, new challenges for course design, the opportunity to meet lecturers from other faculties and to cooperate with them.*

*Nediljka Vukojević Medvidović, Ph.D., Faculty of Chemistry and Technology, University of Split*

Some of the challenges above require changes in Croatian education. In particular, the promotion of taking over responsibility and the motivation of students require new content and methodological-didactic concepts that promote young people's awareness of their role in society as well as the acquisition of knowledge, skills and motivation for civic engagement. The environmental Association Sunce is convinced that the reform of the Croatian education system, which has long been discussed and has not yet been implemented, and the integration of citizenship education into curriculum would make a significant contribution.

In the following, solutions and suggestions for improvement for future projects are listed for the challenges in the respective phases of the Service-Learning programme.

#### 3.1 Planning the Service-Learning programme

##### Challenge - Reconciling the needs of the lecturers and the partner organisation

The biggest challenges occurred during the planning phase of the Service-Learning programme. A major challenge was to link the concerns of the environmental Association Sunce with the curricular content and to find ways to formalise the allocation of ECTS-points to the students participating in the

Service-Learning programme. For example, it was particularly challenging to implement the project "Service-Learning - Public events on sustainable waste management and sustainable tourism" (chapter 2.1), as four different faculties with different curricular commitments on common topics worked together on this programme, taking certain requirements into account. At the event "Service-Learning - Citizen participation in responsible management of natural resources" (chapter 2.2) the challenge was to bring the course and activities of the project "Responsible for nature" in line with the curriculum of the seminar. In addition, the interests and specifications of the environmental Association Sunce as well as the concerns and interests of the students had to be considered in both projects. It was also important to maintain a balance between the obligations of the students during the seminar and the requirements of Service-Learning.

→ One solution is intensive communication and consultation between the mentors of the environmental Association Sunce and the lecturers at the beginning of each semester in order to adapt the concept of the Service-Learning programme to the needs of the environmental Association Sunce, the curriculum of the faculty and the interests of the students involved. Experience in implementing the Service-Learning programmes has shown that it is important to clearly define the learning objectives and ECTS-points before the programme starts and to communicate them to the participating students and the commitment partner. In this way, the obligations as well as the scope and content of the students' commitment were bindingly defined right at the beginning of the Service-Learning programme, so that the partner organisation gained an informative insight into the students' actual possible achievements.

→ Experience regarding the link to the curriculum has also shown that it is easier to link the project to specialist internships than to seminars that pursue specific learning objectives. Internships often allow a wider range of activities, while ensuring that the commitment encourages the acquisition of specific expertise and practical experience.

→ The lecturers involved in the project defined a certain number of ECTS-points for the commitment project for the students who took part in the Service-Learning programme as part of their courses. However, this meant that the number of ECTS points varied from faculty to faculty and from course to course. For this reason, an offer of courses with a clearly defined calculation of ECTS-points represents a future challenge (see material 2.1.3). One conceivable solution could be the cooperation between the environmental Association Sunce and the university in Split in the form of a teaching station.<sup>59</sup> For the successful implementation of the Service-Learning programme, it would also be beneficial to offer elective courses that are offered exclusively as Service-Learning events.

*By participating in the Service-Learning programme, I have gained an insight into a different way of working with students. I will continue to use this method in my courses.*

*Ladislav Vrsalović, Ph.D., Faculty of Chemistry and Technology, University of Split*

## Challenge - Pilot projects and first steps

In the planning phase of the first Service-Learning programme, the lack of knowledge about the essential aspects of Service-Learning and the lack of experience in its implementation represented a challenge.

→ The lack of previous knowledge could be made up for through workshops on Service-Learning, which were aimed at university lecturers and mentors of the environmental Association Sunce, through the study trip "Service-Learning at universities in Germany - Erfurt-Kassel-Essen" and through the training "Consulting, project management and cooperation with young people". In addition, the Service-Learning programme was continuously accompanied and supported by an expert from the German partner organisation DGU.

38 <sup>59</sup> Sunce has been a teaching station for students of the Faculty of Philosophy since 2016 and for students of the Department of Marine Research since 2018. The teaching stations are founded in cooperation with the university and serve as a link between science, university teaching and practice. In addition to the diploma, students receive a certain number of ECTS-points for their commitment at the learning station. One of the strategic goals of Split University is the development of a broad network of teaching stations where the university as a socially responsible institution makes its human and material resources available to various social interest groups as the demand arises.

→ It has become apparent that it is extremely important that the university lecturers involved and the employees of the non-profit organisation deal with Service-Learning even before the project begins. This can be achieved, for example, through an introductory workshop on Service-Learning. In addition to good cooperation and communication with interested teachers, the support and acceptance of the programme by the management of the faculty or university is crucial for formalising the commitment regarding the award of ECTS-points. Here the promotion of Service-Learning, in particular the presentation of results and examples of good practice, can be beneficial.

## 3.2 Start of the Service-Learning programme

### Challenge - Attracting students

The promotion of the Service-Learning programme has aroused more interest than expected among students of some faculties. In contrast, teachers from other faculties also tried to motivate students to participate by addressing them personally in their seminars. At the presentation held by the environmental Association Sunce at the faculties, the role of environmental organisations, the importance of active citizen participation and activities in the field of nature and environmental protection were presented. The teachers also informed the students about the opportunities and advantages of participating in the Service-Learning programme in terms of acquiring professional skills. Altogether, the students' interest in the Service-Learning programme was satisfactory. However, the capacity of the environmental Association Sunce would not be enough in case of greater interest or the participation of a larger group - for example an entire seminar. Most of the students involved in the Service-Learning programme had a strong interest in active civic engagement. A major challenge is to attract those students who are not yet sufficiently aware of their role as active citizens in the local community.

→ Project experience has shown that students who have already participated in the programme should promote the Service-Learning programme by presenting their experiences in order to achieve even greater effectiveness. In addition, the promotion of the Service-Learning programme could be supported by information flyers and other promotional materials as well as through various advertising channels (such as websites of the environmental Association Sunce and the participating faculties) or directly as part of the educational activities for young people of the environmental Association Sunce. Lecturers could also promote the Service-Learning programme through direct contact with the students and inquire and stimulate the motivation of the students.



### 3.3 Course of the Service-Learning programme

#### Challenge - Motivation and responsibility of students

During the Service-Learning programme it became clear that the students approached work with different levels of motivation. Therefore, the even distribution of responsibilities and tasks among the students presented a further challenge. Some students were not motivated to play an active role.

→ To encourage students to take on responsibility, the contents of the commitment project and the duties of the students must be clearly defined in the introductory workshop at the beginning of the Service-Learning programme. Students' obligations should also be specified in writing in the agreement to participate in the Service-Learning programme. Continuous communication between the students, teachers and mentors involved is also necessary during Service-Learning.

→ For future Service-Learning programmes, the environmental organisation Sunce plans workshops to strengthen personal motivation. As part of the Service-Learning programme for a new generation of students, the environmental organisation Sunce organised workshops to promote motivation as part of the project "PAZI!<sup>60</sup> (practical - active - together - interdisciplinary!) - Service-Learning programmes for environment and sustainable development".

*Participation in the Service-Learning Programme has made me even more aware of the obstacles to the application of academic knowledge in practice.*

*Slađana Pavlinović, Ph.D., Faculty of Economics, University of Split*

#### Challenge - Communication between all participants

During the Service-Learning programme, the students participated in the four Sunce workshops. The lecturers also had the opportunity to participate in these events but were usually unable to do so due to time constraints. Ultimately, this meant that the exchange between the students and the lecturers was not intensive in this phase.

→ It is recommended to periodically inform the teachers by means of short reports about the activities of the students, the current status of the project and the questions and problems arising. It is also important to hold meetings with all participants - teachers, students and mentors from the partner organisation - during the Service-Learning programme in order to discuss the current status of the project, the important concerns of the participants and possible problems.

→ Reflection is an essential part of Service-Learning and should be conducted in parallel. There are various methods for carrying out the reflection (see materials 1.1, 2.1.14, 2.1.16). It is recommended to use these methods, to document the results of the reflection and to use them for continuous improvement of the project.

*In the context of educational work in Croatia, both in schools and at universities, reflection, as we have got to know it in the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students", is hardly promoted. Our pupils, teachers and students are not familiar with taking a differentiated view of learning processes and gaining insights from them or applying reflection as an essential part of the learning process. As a result, students were confronted for the first time with questions to reflect on their learning process as part of the Service-Learning programme and this created initial difficulties. It is important to emphasize that all of us - teachers, students and mentors of the environmental Association Sunce - have been shaped by the*

40 <sup>60</sup> The two-year project "PAZI! (practical-active-together-interdisciplinary!) - Service Learning programmes for environment and sustainable development" was launched in March 2018 by the environmental Association Sunce in cooperation with the Faculty of Philosophy, the Faculty of Chemistry and Technology, the Faculty of Law and the Association of Former Students of the Faculty of Chemistry and Technology. The project is financed by the European Social Fund.

*same educational system. Even if there is a great motivation for integrating reflection processes into educational work, it will still take some time before this becomes a matter of fact. However, it is the responsibility of teachers and mentors to support this process. Only experience in conducting reflection will help teachers and mentors to implement it successfully, whether in the context of Service-Learning or other educational activities.*

*Gabrijela Medunić-Orlić, M.Sc. Chemistry, B.Sc., Environmental Science and Technology, Managing Director of Association for Nature Environment and Sustainable Development, Sunce*

### 3.4 Completion of the Service-Learning programme

#### Challenge - Conducting the final event

The final event of the presented Croatian Service-Learning programmes could not be carried out shortly after the completion of the Service-Learning project. Therefore, the challenge was to bring together all those involved in the programme - teachers, students and mentors of the environmental Association Sunce - at a later date.

→ It is recommended to celebrate the final event as soon as possible after the implementation of the programme. The final event offers a good opportunity to reflect on and evaluate the programme and to acknowledge the commitment of the students. In addition, the students receive a special appreciation if the certificates are awarded by the responsible persons of the faculty and the partner organisation during the graduation ceremony. The final event can be arranged in a way that the students present the results of their Service-Learning project. If other fellow students are also invited to the celebration, this can be a chance to inform them about Service-Learning and motivate them to participate in a Service-Learning programme.

The final event can also take the form of an excursion or another joint activity by participants in Service-Learning.

→ Each group of students is specific and has its own dynamics. It is therefore advisable to run the same programme with different student groups and to use the evaluation results to continuously improve the programme.

*My experience with Service-Learning is very positive in every respect.*

*Nediljka Vukojević Medvidović, Ph.D., Faculty of Chemistry and Technology, University of Split*

## MATERIALS FOR PRACTICE



## MATERIALS FOR PRACTICE

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## Material 1.1: Methods for reflecting on the Service-Learning project: learning diary, MicroArt method, reflection roundabout, letter to myself, exchange of questions

Reflection is a central feature of Service Learning, because it "plays a decisive role in being able to process, arrange and evaluate the experiences and skills acquired".<sup>61</sup> Reflection is "the link between service and learning" and the key to enabling "learning through experience" in Service Learning.<sup>62</sup>

The following methods can be used for reflection:

- Learning diary
- MicroArt method
- Reflection roundabout
- Letter to myself
- Exchange of questions

Exemplary questions for reflection can be found in Working Material 2.2 of the handbook "Sustainable Development - understanding, implementing and creating". Selected methods are described in more detail below.

### Learning diary

In order to document their own learning process and competence acquisition, students create a so-called learning diary. Keeping a diary supports a differentiated examination of one's own learning and is helpful in becoming the author of one's own learning. The main purpose of the learning diary is to observe and record in writing the personal learning process and one's own examination of the topic of the service learning project.

The following goals can be pursued by keeping a learning diary:<sup>63</sup>

- Students learn to look at themselves and their own learning process, their own thoughts, feelings and actions can be recorded and thus made "usable" for evaluation in the following reflection units.
- Learning processes are better understood and learning strategies are developed more consciously.
- Learning progress becomes more visible for the writer, the benefit for the own person becomes particularly clear here ("I do not learn for others, marks etc., but for myself").
- The author can decide for himself what is openly discussed and what is not.

The form and design of the learning diary correspond to personal preferences. There are no limits to creativity. Photos, sketches, poems, drawings or even tape recordings can be part of a diary. The learning diary is written by everyone for themselves, and in the end, it should be fun. At the end of the service learning project, a final discussion should be held in small groups, during which a phase of the personal learning process is presented, discussed and reflected upon.

Material 2.1.13 lists reflection questions that have been addressed by the students within the framework of the Service Learning programme listed in this handbook in chapter 2.1.

### MicroArt method

MicroArt is the abbreviation of micro article and describes the brief summary of an event, problem, etc. on half to full a page. The aim is to capture only the essentials and to exchange information with others on the respective topic based on the compact article. The MicroArt method was developed by Helmut Willke (2001) and serves the systematic knowledge management in organizations. In the context of Service-Learning, this method can be helpful in making learning processes usable for people who were not originally involved. A micro article does not present data, but a problem to which it

44 <sup>61</sup> Link, C. (2006): *Das pädagogische Konzept Service Learning und dessen Relevanz für die Förderung Bürgerschaftlichen Engagements in der Gesellschaft – Eine theoretische Auseinandersetzung über Chancen und Grenzen*. Lüneburg, p. 48. <sup>62</sup> Seifert, A./Zentner, S./Nagy, F. (2012): *Praxisbuch Service-Learning – Lernen durch Engagement an Schulen*. Weinheim, p. 94. <sup>63</sup> mehrwert – Agentur für Soziales Lernen (2018): „Do it! Das Programm für gesellschaftliches Engagement an Hochschulen – Handlungsleitfaden“. Stuttgart, p. 55.

contributes, a "case" for whose processing it makes suggestions, or contextual observations that lead to new questions. Based on a micro article, it is possible to initiate a collective learning process with all students in the plenum. The instrument serves the purpose of bringing an individual learning experience, knowledge, idea, expertise, consideration, reflection, etc. into a certain form. This form has the following characteristics: <sup>64</sup>

1. Author must have a learning experience, e.g. design a concept - i.e. generate knowledge.
2. Author must clarify his or her expertise (introduce, objectify, etc.), i.e. explain that he or she can formulate this in writing.
3. He or she must express the knowledge in such a way that others can read, i.e. reproduce and understand what is written.
4. Author must publish articles, i.e. make them accessible to an interested audience.
5. The success of the article is measured by the number of people who read and use it.
6. A written, published and read article does not stand alone, but is an element of a continuous process of transformation and revision of knowledge, because its use gives reason for criticism, extensions, questions and new suggestions.

Tip: Such an article is also suitable as proof of performance.

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**Source:** mehrwert – Agentur für Soziales Lernen (2018): „Do it! Das Programm für gesellschaftliches Engagement an Hochschulen – Handlungsleitfaden“, Stuttgart, p.53.

## Reflection roundabout

In preparation, larger sheets of paper are hung up at different points in the room, on each sheet there is a beginning of the sentence that is to be supplemented, for example for a reflection during the engagement:

- Today I was most pleased about...
- This time in the implementation of Service-Learning I showed that ...
- Difficulties with the commitment are...
- If we could start the engagement all over again...
- Our commitment in a word...

The students divide into as many small groups as there are hanging sheets of paper and each group places itself in front of one of the sheets. Everyone writes/paints freely associating his personal additions and answers. When everyone is finished, each group moves on to the next question. It is also possible to refer to what the other students have already written. This continues until the groups return to their original paper. Only then does the small group begin to communicate (until then the students move in groups, but they think, read and write individually). Once everyone has read the poster, the group exchanges ideas and agrees on three messages to share/discuss with the entire class.

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**Source:** Seifert, A./Zentner, S./Nagy, F. (2012): Praxisbuch Service-Learning – Lernen durch Engagement an Schulen. Weinheim, p. 212.

<sup>64</sup> Willke, H. (2001): *Systemisches Wissensmanagement. Mit Fallstudien von Karsten Krück. Stuttgart, p. 107f.*

## Letter to myself

Students write a letter addressed to themselves, for example at the beginning of Service-Learning:

- Dear Jonathan, our engagement starts tomorrow. I'm pretty excited because..., I think it's going to be..., I expect/hope that..., I have planned...
- Dear Sarah, when you read this letter, I hope you have achieved the following..., I'm sure you feel like..., the following beautiful thing could have happened..., you'll probably have learned that...

The letter is sealed in an envelope and only opened again at a later point in time (at the end of the Service-Learning) and reflected in the light of the newly gained insights and experiences.

Alternative: At the end of Service-Learning, students write a letter to themselves in which they report on their commitment project. What were the highlights? What difficulties have I overcome? What have we achieved? What have I learned for the future? How would I like to continue my commitment/maybe continue my project? The letter is closed, provided with the teacher's own address, collected by the teacher and sent to the students by post one semester later. The teacher may then invite to a retrospective reflection or to plans for a new service learning project.

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**Source:** Seifert, A./Zentner, S./Nagy, F. (2012): Praxisbuch Service-Learning – Lernen durch Engagement an Schulen. Weinheim, p. 212.

## Exchange of questions

Everyone writes a question on a piece of paper about Service-Learning in general or about an experience of commitment that is a burning issue, for example: a difficulty that has not yet been solved, an experience that has been confusing, a general question or ambiguity. The slips are exchanged in pairs (either by chance or with a partner of your choice). Everyone notes ideas or thoughts about the partner's question on the note received and then returns the sheet to the sender.

**Goals:** formulate questions/challenges, address the questions of others, learn from each other.

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**Source:** Seifert, A./Zentner, S./Nagy, F. (2012): Praxisbuch Service-Learning – Lernen durch Engagement an Schulen. Weinheim, p. 207.

## Material 1.2: Evaluation of the Service-Learning programme (students)

### EVALUATION OF THE SERVICE-LEARNING PROGRAMME

Dear students,

To ensure a continuous quality improvement of the Service-Learning programmes, we ask for your support by answering the following questions.

Thank you for your cooperation  
Environmental Association Sunce

Please assess to what extent you agree with the statements listed and - unless otherwise stated - make an assessment according to the following scheme:

1 - I absolutely agree; 2 - I agree; 3 - I neither agree nor disagree; 4 - I do not agree; 5 - I absolutely disagree.

Please also comment on your answers in the text field provided.

1. Participation in the Service-Learning programme has contributed to...:

a.) your personal development.

1      2      3      4      5

Comment: \_\_\_\_\_

b.) your professional development.

1      2      3      4      5

Comment: \_\_\_\_\_

c.) more ecological awareness and ecological behaviour.

1      2      3      4      5

Comment: \_\_\_\_\_

d.) your interest in future participation in environmental protection activities.

1      2      3      4      5

Comment: \_\_\_\_\_

2. Would you like to participate in such a Service-Learning programme again if you had the opportunity?

YES

NO

Comment: \_\_\_\_\_

3. Do you think that Service-Learning should be included in the University of Split programme?

YES

NO

Comment: \_\_\_\_\_

4. Do you believe that this form of learning has been well integrated into your faculty's plan and programme?

YES

NO

Comment: \_\_\_\_\_

5. You can better understand the contents of your course at the faculty by participating in Service-Learning.

1      2      3      4      5

Comment: \_\_\_\_\_

6. The instructions for carrying out the various activities within the Service-Learning programme were understandable and useful.

1      2      3      4      5

Comment: \_\_\_\_\_

7. Which workshop has contributed most to your personal/professional development?

- a.) "Sustainable waste management - Introduction"
- b.) "Sustainable tourism - Introduction"
- c.) "Organisation of public events and work with the media"
- d.) "Planning of activities and public events"

Comment: \_\_\_\_\_

8. Are you aware of another place that could be included in a Service-Learning programme in the field of environmental protection or sustainable tourism and sustainable waste management?

YES

NO

Comment: \_\_\_\_\_

9. Is there any problem that has been encountered during the Service-Learning programme that could not be solved?

YES

NO

Comment: \_\_\_\_\_

10. Do you have suggestions for improving the Service-Learning programme? Please list.

YES

NO

Comment: \_\_\_\_\_

11. Would you recommend other students to participate in this Service-Learning programme?

YES

NO

Comment: \_\_\_\_\_

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**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 1.3: Evaluation of the Service-Learning programme (lecturers)

### EVALUATION OF THE SERVICE-LEARNING-PROGRAMME

Dear lecturers,

To ensure a continuous quality improvement of the Service-Learning programmes, we ask for your support by answering the following questions.

Thank you for your cooperation  
Environmental Association Sunce

Please assess to what extent you agree with the statements listed and - unless otherwise stated - make an assessment according to the following scheme:

1 - I absolutely agree; 2 - I agree; 3 - I neither agree nor disagree; 4 - I do not agree; 5 - I absolutely disagree.

Please also comment on your answers in the text field provided.

1. The cooperation with Sunce and the implementation of the Service-Learning programme within your course has contributed to...:

a.) your personal development.

1      2      3      4      5

Comment: \_\_\_\_\_

b.) your professional development.

1      2      3      4      5

Comment: \_\_\_\_\_

c.) more ecological awareness and ecological behaviour.

1      2      3      4      5

Comment: \_\_\_\_\_

d.) your interest in future participation in environmental protection activities.

1      2      3      4      5

Comment: \_\_\_\_\_

2. The Service-Learning programme has been successfully implemented.

1      2      3      4      5

Comment: \_\_\_\_\_

3. Do you think that Service-Learning should be included in the University of Split programme?

YES

NO

Comment: \_\_\_\_\_

4. Do you believe that this form of learning has been well integrated into your faculty's curriculum and programme?

YES

NO

Comment: \_\_\_\_\_

5. The ECTS-points awarded correspond to the effort, work requirements and working time of the students? Please explain.

1      2      3      4      5

Comment: \_\_\_\_\_

6. Your students were satisfied with the selected topics and the experience they gained in this programme.

1      2      3      4      5

Comment: \_\_\_\_\_

7. In your opinion, how intensively were you involved in the activities of the Service-Learning programme?

insufficient

enough

too much

8. The environmental Association Sunce has good skills in running a Service-Learning programme.

1      2      3      4      5

Comment: \_\_\_\_\_

9. Are you satisfied with the entire organisation of the Service-Learning programme?

YES

NO

Comment: \_\_\_\_\_

10. Is there a problem that has arisen during the Service-Learning programme? If YES, please list it and, if necessary, how was it solved.

YES

NO

Comment: \_\_\_\_\_

11. Do you have any suggestions for improving the Service-Learning programme? Please list.

Comment: \_\_\_\_\_

12. Would you again offer your students a Service-Learning programme?

YES

NO

Comment: \_\_\_\_\_

13. Would you recommend to other lecturers to offer a Service-Learning programme as part of their courses?

YES

NO

Comment: \_\_\_\_\_



## Material 2.1.1 Guidelines, design and results of the Service-Learning project

		GROUP A	
SPECIFIED BY THE PROJECT	WHO?	Students of the Faculty of Economics and the University Department of Marine Research in Split	Students of the Faculty of Chemistry and Technology and the Faculty of Humanities and Social Sciences in Split
	THEME	Sustainable tourism	Sustainable waste management
	TYPE OF EVENT	Interactive events for students	
	BUDGET	EUR 250	EUR 250
	FOR WHOM?	50 Students	50 Students
DEVELOPED AND PERFORMED BY THE STUDENTS	WHAT?	Conception and implementation of a forum on "Sustainable tourism an opportunity - not a utopia!" including discussions with the lecturing experts on the challenges and opportunities of sustainable tourism	Development of a waste separation system with two "Green Islands" for plastic, paper and cardboard as well as organic waste and residual waste in the Faculty of Chemistry and Technology; presentation of the project to the students and teachers of the Faculty of Chemistry and Technology; workshop for primary school children about waste separation
	WHERE?	Faculty of Economics, University of Split	Faculty of Chemistry and Technology, University of Split
	RESULTS	Three thematic lectures; 32 participating students; discussion with 32 participants in four small groups; five reports in the local media (TV, radio)	Two "Green Islands" for plastic, paper and cardboard as well as organic waste and residual waste in the Faculty of Chemistry and Technology; a two-part public event; first part: target group students and teachers; presentation/lecture and demonstration of the "Green Islands", 49 participants; second part: target group primary school children; short lecture, three educational games, 72 participating primary school children; five reports in the local media (TV, radio)

GROUP B			SPECIFIED BY THE PROJECT
Students of the Faculty of Chemistry and Technology and the Faculty of Humanities and Social Sciences in Split	Students of the Faculty of Economics and the University Department of Marine Research in Split	WHO?	
Sustainable waste management	Sustainable tourism	THEME	
Public Events		TYPE OF EVENT	
EUR 250	EUR 250	BUDGET	
100 Citizens (m/f)	100 Citizens (m/f)	FOR WHOM?	
Conception and implementation of the public event "Plastic Detox " with the aim of informing the public about the excessive use of plastic as well as its improper disposal and to promote awareness of the problem.	Conception and implementation of the public event "Educational Café with home-made regional specialities" with lectures and discussion on the topic of "sustainable tourism".	WHAT?	
City promenade Riva of Split	Municipal Library "Marko Marulić", Split	WHERE?	
About 150 citizens took part in the event; 120 linen bags were painted by citizens and taken home; 62 waste separation questionnaires were completed; seven reports in the local media (TV, radio)	13 citizens took part in the event; two thematic lectures were given, 13 people took part in the subsequent discussion on sustainable tourism; seven reports in the local media (TV, radio)	RESULTS	DEVELOPED AND PERFORMED BY THE STUDENTS

Source: Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.2: Links to the curriculum of the participating faculties of the University in Split

This Service-Learning programme was a pilot project. The participating lecturers modified the curriculum of their courses in order to be able to offer Service-Learning and link it to their courses. For the students participating in the Service-Learning programme, an alternative crediting of the workload, the performance record and the ECTS points was made possible.

### Faculty of Humanities and Social Sciences

Course name	Workload	Specific learning objectives of the Service-Learning programme	Required proof of performance	Crediting of participation in the Service-Learning programme (ECTS-points)
Educational sociology (winter term)	Total course: 150h, out of that: - lecture: 30 h - seminar or participation in the Service-Learning programme: 30 h - exam preparation and examination: 90 h	Students learn about Service-Learning as a new form of learning to acquire knowledge, practical skills and abilities in nature and environmental protection.	For the course: Participation in the lecture, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme <sup>65</sup> and preparation of a seminar on Service-Learning, presentation of the seminar to other students.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The Service-Learning project was credited as a seminar paper.
Methodology of nature and social studies 2 (winter term)	Total course: 150h, out of that: - method exercises: 30h - seminar or participation in the Service-Learning programme: 30 h - exam preparation and examination: 90 h	Students apply their acquired knowledge to practical exercises with students and prepare themselves for teaching activities, especially extracurricular activities.	For the course: Participation in the lectures/exercises, preparation of the seminar, answering tasks for independent solution and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS point > The Service-Learning project was credited as a seminar paper.
Ecosystems and society (summer term)	Total course: 120h, out of that: - lecture: 30h - seminar or participation in the Service-Learning programme: 15h - exam preparation and examination: 75h	Students understand the relationship between ecosystems (nature/environment) and society and the concept of sustainable development, including sustainable waste management and sustainable tourism.	For the course: Participation in the lecture, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 4 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The Service-Learning project was credited as a seminar paper.

Methodology of nature and social studies 3 (summer term)	Total course: 135h, out of that: - method exercises: 45h - seminar or participation in the Service-Learning programme: 15h - exam preparation and examination: 75h	Students learn to plan, prepare and implement social and natural history lessons and to consolidate their knowledge on ecological topics.	For the course: Participation in the methodological exercises, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Course total: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The Service-Learning project was credited as a seminar paper.
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## Faculty of Chemistry and Technology

Course name	Workload	Specific learning objectives of the Service-Learning programme	Required proof of performance	Crediting of participation in the Service-Learning programme (ECTS-points)
Soil chemistry (winter term)	Total course: 150h, out of that: - lecture: 30h - seminar or participation in the Service-Learning programme: 15h - exercises: 15h - exam preparation and exam: 90h	Students learn about composting, composting plants and the effects of a landfill on the soil.	For the course: Participation in the lectures and exercises, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > An examination section has been remitted..
Sewage technology (winter term)	Course: 195h, out of that: - lecture: 30h - seminar or participation in the Service-Learning programme: 15h - exercises: 30h - exam preparation and exam 120h	Students learn about the effects of landfills, industrialisation and excessive tourist activities on waters.	For the course: Participation in the lectures and exercises, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 6.5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > An examination section has been remitted.
Water protection (summer term)	Total course: 120h, out of that: - lecture: 30h - seminar or participation in the Service-Learning programme: 15h - exam preparation and exam: 75h	Students learn about the distribution and quality of waters in nature, the characteristics of water ecosystems and the effects of waste and tourism on water ecosystems.	For the course: Participation in the lecture, preparation of the seminar and passing the exam.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 4 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > An examination section has been remitted.

## Faculty of Economics

Course name	Workload	Specific learning objectives of the Service-Learning programme	Required proof of performance	Crediting of participation in the Service-Learning programme (ECTS-points)
Event management (winter term)	Total course: 150h, out of that: - lecture: 30h - tutorial: 30h - preparation of the project or participation in the Service-Learning programme: 30h - exam preparation and exam: 60h	Students learn the components of organizing and conducting public events with the aim of raising public awareness of environmental issues and apply the knowledge acquired in the practical organization and conduct of a public event.	For the course: Written examination and developed event management plan.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 2 ECTS-points > Credit was given for the preparation of an event management plan and the organisation and realisation of the public event on tourism and the environment.
Environmental economics (summer term)	Total course: 150h, out of that: - lecture: 30h - tutorials: 30h - preparation of the project or participation in the Service-Learning programme: 30h - exam preparation and exam: 60h	Students learn about important environmental issues at local level as a basis for further economic analysis.	For the course: Written review and project development and presentation.  For the Service-Learning project: Participation in the entire Service-Learning programme.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The organization of the public event was credited as project development and presentation.

## University Department of Marine Research

Course name	Workload	Specific learning objectives of the Service-Learning programme	Required proof of performance	Crediting of participation in the Service-Learning programme (ECTS-points)
Specialized internship (winter and summer term)	Practical work: 60h	The students work actively in the environmental non-governmental organisation, deepen as well as apply their knowledge in the field of environmental protection.	Participation in the entire Service-Learning programme.	Total course: 2 ECTS-points  Participation in the Service-Learning programme was credited with 2 ECTS-points.

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.3: Example calculation for awarding credit points for Service-Learning seminars

### Explanation for non-university project initiators

Credit points (CP or ECTS-points) are credit points that are used to represent the workload of students. Bachelor's and master's degrees require students to earn a certain number of credit points in order to obtain their degree. As a rule, this is 5 CP for an event which corresponds to a workload of 150 hours (1CP = 25-30 hours). A total of 750-900 working hours, i.e. 30 CP, are to be collected by students per semester.

If you contact a university to establish the Service-Learning programme, it makes sense to think about the time required and the corresponding allocation of credit points.

The following is an example of a calculation:

Service-Learning phase	Expenditure in hours
Introductory workshop	5 h
Searching and contacting an institution	10 h
Bibliographical research on the theory of the main topic of Service-Learning	20 h
Practical work of students	60 h
Accompanying reflection measures (e.g. keeping a learning diary)	15 h
Workshop interim evaluation	2,5 h
Preparation of the project report / the final presentation etc.	30 h
Evaluation workshop	7,5 h
Total amount of work	150 h this corresponds to 5 ECTS points

**Source:** mehrwert - Agentur für Soziales Lernen (2018): „Do it! Das Programm für gesellschaftliches Engagement an Hochschulen - Handlungsleitfaden“, Stuttgart, p. 47f. Online available under: [www.agentur-mehrwert.de/do-it-studierendenprojekte/](http://www.agentur-mehrwert.de/do-it-studierendenprojekte/) (28.03.2018).

## **Material 2.1.4: Agreement between the environmental Association Sunce and the participating faculties**

### **Faculty of Economics of the University of Split**

Cvite Fiskovića 5

PIN: 84477684422

represented by Željko Garača, Ph.D., Dean (in the following text: Faculty)

and

### **Association for Nature, Environment and Sustainable Development, Sunce,**

Split, Obala HNP 7/III

PIN: 17644269011

represented by Gabrijele Medunić-Orlić, M.Sc., Executive Director (in the following text: environmental Association Sunce)

conclude the following agreement:

### **Agreement on the implementation of the Service Learning programme**

#### **Subject matter of the contract**

##### **Article 1**

In the Service Learning programme, students serve the common good. The learning arrangement also promotes the competences of the students as envisaged in the curriculum and applies theoretical knowledge in practice. The environmental Association Sunce has developed a Service-Learning programme in cooperation with the Faculty of Economics as part of the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students". This contract regulates the rights, duties and responsibilities regarding the implementation of the Service-Learning programme in cooperation between the Faculty and the environmental Association Sunce.

#### **Specifications and implementation of the Service-Learning programme**

##### **Article 2**

The following series of workshops, designed and conducted by Sunce, forms the framework of the Service-Learning programme:

- Sustainable waste management - Introduction
- Sustainable tourism - Introduction
- Organising public events and working with the media
- Planning of activities and events
- Intermediate reflection
- Completion of the Service-Learning programme

The students' commitment is implemented in the form of the organization and implementation of public events on sustainable waste management or sustainable tourism. Costs of materials and any other expenses for events (rental costs, etc.) will be covered by the environmental Association Sunce.

The Service-Learning course is integrated into the Faculty's teaching programme and is credited with ECTS-points.

The time required for the Service-Learning programme depends on the type of commitment. This is defined at the beginning of each semester and amounts to at least 30, maximum 176 hours.

## **Responsibilities of the Faculty**

### **Article 3**

In order to ensure the implementation of the students' Service-Learning programme, the Faculty commits itself to

- appoint a teacher responsible for coordinating the implementation of the Service-Learning programme,
- define the Service-Learning programme with the curricular links, the duties of the students and the number of ECTS-points at the beginning of the semester,
- carry out the promotion of the Service-Learning programme for students before the start of the implementation of the Service-Learning programme in the winter and summer semesters 2016/2017,
- ensure that at least two students each take part in the Service-Learning programme in the winter and summer semesters,
- provide Sunce with the data (first and last name, field of study, seminar, etc.) of the students participating in the Service-Learning programme in accordance with the Privacy Act before the start of the Service-Learning programme.

## **Responsibilities of the environmental Association Sunce**

### **Article 4**

To ensure the implementation of the Service-Learning programme, the environmental Association Sunce is obliged to

- develop a Service-Learning plan for each semester together with the Faculty,
- design and implement the application of the Service-Learning programme together with the Faculty,
- design and conduct the workshop series from article 2,
- ensure the support of the students by the mentors of the environmental Association Sunce,
- have an agreement on the rights, duties and responsibilities of students in the implementation of the Service-Learning programme,
- inform the Faculty immediately, to terminate the contract and to note that the programme has not been successfully completed if students do not fulfil their assumed duties.

## **Responsibilities of the mentors of the environmental Association Sunce**

### **Article 5**

The mentor of the environmental Association Sunce is obliged to

- familiarize the students with the areas of responsibility of the environmental Association Sunce,
- support students in organising public events,
- prepare a written report on the commitment of the students as well as the results and to inform the teachers about it,
- provide the students with the necessary documents/materials for the design of public events,
- reflect on the Service-Learning programme with the students.

## **Responsibilities of students**

### **Article 6**

The students of the Faculty participating in the Service-Learning programme in the environmental Association Sunce are obliged to

- conclude an agreement with the environmental Association Sunce on mutual rights, obligations and responsibilities within the framework of the implementation of the Service-Learning programme,
- participate in the series of workshops under article 2 of this agreement,
- actively participate in the design and implementation of the public event,
- participate in the Sunce Service-Learning programme during Sunce's official working hours in accordance with the rules and regulations applicable to Sunce employees,
- submit work created as part of the Service-Learning programme to the environmental Association Sunce,
- evaluate the implementation of the Service-Learning programme.

## Right to use the results of the Service-Learning programme

### Article 7

- The environmental Association Sunce has the right to use all results achieved through the Service-Learning programme.
- Students may use the results of the Service-Learning programme to create their papers.
- Students writing papers based on the Service-Learning programme are required to submit an electronic version of these papers to Sunce.

## Duration of the agreement

### Article 8

The agreement on the implementation of the Service-Learning programme will be concluded for the academic year 2016/2017.

## Drafting of the agreement

### Article 9

This agreement was made in two (2) copies of which each party has received one (1) copy.

#### Association Sunce

Gabrijela Medunić-Orlić,  
M.Sc. Chemistry  
Executive Director  
Agreement number: 2/2016

#### Faculty

Željko Garača, Ph.D.  
Dean  
Classification number: 406-07/15-01/  
Reference number: 2181-196-01-01-15-01

Split, 14.7.2016

Split, 17.7.2016

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**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.5: Methods brainstorming and brainwriting

### Brainwriting

*Brainwriting* is a method to collect ideas, suggestions, expectations, and wishes etc. to a certain question. Participants receive empty cards and write an answer to a specific question. They have five minutes to do so. The participants can write down as many ideas as they got. It is important that only one idea is written down per card. After some time for consideration, results are communicated with others by sticking or pinning his or her written cards to a wall and explaining them to other participants. Afterwards, all answers are assigned to main topics, so that one gets a good overview. The method can perform several functions, depending on the task at hand. For example, it can stimulate reflection, help to find common topics or work rules can be created.

**Duration:** 45 minutes

**Materials:** Cards for writing on, pens, adhesive strips or pins

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**Source:** Deutsche Kinder- und Jugendstiftung (eds.) (2009): Methodensammlung: Lernorte der Demokratie im Vor- und Grundschulalter. Dresden, p. 23, 32.

### Brainstorming

*Brainstorming* pursues the same goal as *brainwriting*. Unlike brainwriting, however, participants express their suggestions verbally on a particular question, idea, etc. These are written by a moderator on a board or a sheet of paper. When the participants' flow of ideas ends, the result is read out at the end. Afterwards, everyone has the opportunity to add further ideas. If there are no more additions, the brainstorming is finished.

**Duration:** 20 Minutes

**Materials:** at least two large sheets of paper, adhesive strips to hang sheets on the wall or pin boards with needles or flipcharts, one or two thick felt pens

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**Source:** [www.kinderpolitik.de](http://www.kinderpolitik.de) (27.02.2018).



## **Material 2.1.6: Agreement between the environmental Association Sunce and the students**

### **Agreement about participation in the Service-Learning programme**

#### **Article 1**

This contract specifies the cooperation between the Association for Nature, Environment and Sustainable Development Sunce, Split, Obala HNP 7/III (hereinafter: environmental Association Sunce), as organizer of the Service-Learning programme and the student..... (further text: student) of the Faculty of Economics.

#### **Article 2**

In the Service-Learning programme, students serve the common good, thereby promoting the development of the skills envisaged in the curriculum. As part of the joint project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students", the environmental Association Sunce has developed a Service-Learning project together with the Faculty of Economics. The project, which is carried out in cooperation with the German Foundation for Environmental Education (DGU), is funded by the German Federal Foundation for the Environment (DBU).

#### **Article 3**

The environmental Association Sunce actively carries out projects and activities that promote nature conservation and environmental protection. Sunce is committed to managing natural resources in accordance with the principles of sustainable development. Students' commitment to the Service-Learning programme contributes to achieving these goals.

#### **Article 4**

The student will participate in the following activities from 11 November 2016 to 20 March 2017:

- Workshop Series
  1. "Sustainable waste management - Introduction"
  2. "Sustainable tourism - Introduction"
  3. "Organisation of public events and work with the media"
  4. "Planning of activities and events"
  5. "Interim reflection"
  6. "Completion of the Service-Learning Program"
- Preparation and implementation of an interactive course for at least 50 students.
- Cooperation with the media (radio, TV, newspapers)

#### **Article 5**

The commitment in the academic year 2016/2017 will amount to at least 35 hours. The student undertakes to fill in the number of hours of engagement in the form provided by the environmental Association Sunce. The total number of hours will be shown in the confirmation of participation in the Service-Learning Programme, which will be handed over to the student by the environmental Association Sunce after the completion of the engagement.

#### **Article 6**

The student is entitled to:

- professional help and support by the project staff of the environmental Association Sunce during the engagement and in particular preparation and implementation of the public event,
- adequate and safe working conditions in accordance with the activities that he/she carries out,
- protection of privacy and personal data.

**Article 7**

Sunce commits itself to take all necessary precautions for the personal safety of students during the duration of the Service-Learning programme.

**Article 8**

The student undertakes to handle the equipment of the environmental Association Sunce responsibly and carefully and not to damage the reputation of the organization Sunce through her/his behaviour.

**Article 9**

The student undertakes to inform the environmental Association Sunce in adequate time about the problems that may arise during the Service-Learning project or the implementation of the public event and to try to find a solution in open communication with the environmental Association Sunce.

**Article 10**

The environmental Association Sunce will terminate the contract if the student fails to fulfil his/her obligations (or if the student fails to attend two of four scheduled meetings between the fourth workshop and the public event).

**Article 11**

The employee/environmental educator in the Association Sunce, Mrs. Margita Radman, is responsible for the direct supervision of the task accomplishment.  
Mrs. Gabrijela Medunić-Orlić, project manager, is obliged to mediate in case of any problems or difficulties and to try to find a mutually satisfactory solution.

**Article 12**

Sunce retains ownership of all information and audiovisual materials created during the Service-Learning project.  
The environmental Association Sunce has the right to use all results achieved through the Service-Learning programme.  
The student may use the results of the Service-Learning programme to create works.  
Students who produce papers based on the Service-Learning programme from the previous paragraph are required to submit an electronic version of this paper to Sunce.

**Article 13**

This agreement has been made in two (2) copies of which each party has received one (1) copy.

Split, 11.11.2016.

STUDENT:

.....

ASSOCIATION SUNCE:

.....

## Material 2.1.7: Schedule workshop "Sustainable waste management - Introduction"

### WORKSHOP PROGRAMME 1st Workshop "Sustainable waste management - Introduction".

Time	Content/exercise/activity	Location
08:30 - 09:10	Welcome and introduction round  Thematic introduction: - What problems are there in waste management in Dalmatia? - What are the causes of these problems? - What are the consequences?	Office of the environmental Association Sunce
09:10 - 09:35	Presentation of the environmental Association Sunce: - Projects on waste disposal of the environmental Association Sunce - Practice of waste disposal in the office of the environmental Association Sunce  Work assignment for the exploration of learning locations	Office of the environmental Association Sunce
09:35 - 10:00	Travel to the municipal landfill <i>Karepovac</i> (incl. coffee break)	
10:00 - 11:00	Visit to the <i>Karepovac</i> landfill and the recycling yard	<i>Karepovac</i> landfill, Split
11:00 - 11:45	Return/coffee break in Solin	
11:45 - 12:45	Visit to the waste paper recycling company <i>Unija papir</i>	<i>Unija papir</i> , Split
12:45 - 14:00	Visit of the composting plant of the primary school <i>Kamen Šine</i>	Primary School <i>Kamen Šine</i> , Split
14:00 - 15:00	Lunch	Faculty of Economics
15:00 - 15:30	Presentation and discussion of the work results: - Causes and consequences of the waste problem - What can everyone do about it personally?	Faculty of Economics
15:30 - 16:00	Reflection and evaluation	Faculty of Economics

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

**Material 2.1.8: Schedule Workshop "Sustainable tourism - Introduction"**

**WORKSHOP PROGRAMME**  
**2nd Workshop "Sustainable tourism - Introduction"**  
**07 April 2017**

Time	Content/exercise/activity	Location
08:00 – 08:30	Arrival of the participants, departure to Omiš, arrival	Split – Omiš
08:30 – 08:50	Expectations for the workshop	Beginning of the educational trail <i>Leopold Mandić</i> , Zakučac
08:50 – 09:00	Introduction of the participants and presentation of the educational program "Green Excursions" - an educational program of the environmental Association Sunce for students	Beginning of the educational trail <i>Leopold Mandić</i> , Zakučac
09:00 – 10:45	Thematic excursion on the educational trail Leopold Mandić, identification of environmental problems	Educational trail <i>Leopold Mandić</i>
10:45 – 10:55	Trip to the beach in Omiš	Zakučac - Omiš
10:55 – 11:15	Identification of environmental problems	Omiš
11:15 – 11:30	Coffee break	Omiš
11:30 – 11:45	Trip to Hotel Split	Omiš – Podstrana
11:45 – 12:45	Lunch	Hotel Split, Podstrana
12:45 – 13:30	Guided tour of the hotel, presentation of the environmentally friendly hotel concept	Hotel Split, Podstrana
13:30 – 14:00	Return to the Faculty of Economics	Podstrana – Split
14:00 – 15:00	Presentation and discussion of proposed solutions to avoid/reduce identified environmental problems	Faculty of Economics
15:00 – 15:30	Presentation of sustainable activities and initiatives of the environmental Association Sunce	Faculty of Economics
15:30 – 16:00	Reflection and evaluation	Faculty of Economics

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.9: Schedule Workshop "Organisation of public events and work with media"

### WORKSHOP PROGRAMME 3rd Workshop "Organisation of public events and work with the media" 11 April 2017

Time	Content/exercise/activity
08:30 - 08:45	Introduction, reflection on the second workshop and expectations of the third workshop
08:45 - 08:55	Getting to know the participants
08:55 - 09:15	Public events - definition, perception, differences - Types and aims of public events - Characteristics of successful events
09:15 - 09:30	Arrangement and evaluation of a public event - logistics and communication
09:30 - 09:45	Design of a public event - Strategies to stimulate creativity - Methods for decision making
09:45 - 09:55	Planning a public event - Introduction to the "6 Ws"
09:55 - 10:45	Realisation of a public event - Start and end of an event - Interactive and attractive design - Public appearance and dealing with the media
10:45 - 11:05	Coffee break
11:05 - 11:15	Marketing, PR & Communication - Basics
11:15 - 11:45	Communication with the media - basic tools, tips & tricks
11:45 - 12:10	Communication in social networks - Introduction
12:10 - 12:30	Reflection and evaluation

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

**Material 2.1.10: Schedule Workshop "Planning of activities and events"**

**WORKSHOP PROGRAMME**  
**4th Workshop "Planning of Activities and Events"**  
**02 May 2017**

Time	Content/exercise/activity
09:00 – 09:20	Introduction to the tasks and objectives of the workshop
09:20 – 09:30	Expectations of the participants, getting to know the new participants
09:30 – 10:00	Reflection on the three previous workshops
10:00 – 10:40	Background and aim of the public event. Planning of the public event with the help of the "6 Ws": - WHO? (Who is the target group?) - WHAT? (What is the best way to achieve the goal?) - WHEN & WHERE? (Correct Time/Place) - HOW? (How can interest be aroused?) - WHY? (What is the aim?)
10:40 – 10:55	Presentation of the developed ideas for the implementation of their own activities/ events in the plenum.
10:55 – 11:30	Coffee break
11:30 – 12:10	Development of the concept for the implementation of the public event (tasks, schedule, responsible persons, budget etc.)
12:10 – 12:25	Presentation of the concept for the implementation of the public event in the plenum.
12:25 – 13:00	Reflection and evaluation

## Material 2.1.11: Certificate about participation in the Service-Learning programme for Nature and Environmental Protection (student)



Split, 16 March 2017

Class (faculty): .....  
No. (faculty): .....  
No. (Sunce): .....

### Certification for

.....  
(name and surname)

#### about participation in the Service-Learning programme for Nature and Environmental Protection

....., student of the Faculty of Economics has successfully participated in the Service-Learning programme, which was carried out within the framework of the German-Croatian cooperation project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students".

..... participated in the following series of workshops from 11 November 2016 to 20 March 2017:

- 1st Workshop "Sustainable waste management - Introduction", 11 November 2016
- 2nd Workshop "Sustainable tourism - Introduction", 30 November 2016
- 3rd Workshop "Organisation of public events and work with the media", 09 December 2016
- 4th Workshop "Planning of activities and events", 20 December 2016
- 5th Workshop "Completion of the Service-Learning programme", 20 March 2017

In the frame of the Service-Learning programme ..... also participated in the preparation and implementation of a public event on the topic of "Sustainable tourism". The event was held on 17 March 2017 at the Faculty of Economics in Split in the form of a workshop titled "Sustainable tourism - an opportunity and not a utopia!" The aim of this event was to provide students with knowledge about this thematic area and to show design options.

..... has been involved in the Service-Learning project with a total of 42 hours of work.

**Faculty of Economics**  
Maja Fredotović, Ph.D.  
Dean

**Association Sunce**  
Gabrijela Medunić-Orlić, M.Sc. Chemistry,  
B.Sc. Environmental Science and Technology  
Executive Director

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**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.12: Certificate about participation in the Service-Learning programme for Nature and Environmental Protection (teacher)

Split, 15 November 2017

No.: .....

### Certification for

.....

**participated in the academic year 2016/2017  
on the Service-Learning programme for Nature and Environmental Protection.**

Through special commitment of..... the Service-Learning programme "Service-Learning - Public events on the topics of sustainable waste management and sustainable tourism" could be carried out at the Faculty of Chemistry and Technology.

..... has been significantly and successfully involved in the design, preparation, organization and implementation of the Service-Learning programme, which was realized in cooperation between the environmental Association Sunce and the Faculty of Chemistry and Technology.

Within the framework of the programme..... participated in the following project activities:

- Training "Consulting, project management and cooperation with young people"
- Study trip "Service-Learning at Universities - Erfurt-Kassel-Essen", Germany
- Kick-off event at the beginning of the Service-Learning programme
- Workshop: "Sustainable waste management - Introduction"
- Final workshop for reflection and evaluation of the Service-Learning programme

By participating in the implementation of the Service-Learning programme ..... contributed significantly to the development of the competencies required from students in the curriculum.

The Service-Learning programme was carried out as part of the project "Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students" in cooperation between the environmental Association Sunce and the German Foundation for Environmental Education (DGU) and funded by the German Federal Environmental Foundation (DBU).

**Association Sunce**  
Gabrijela Medunić-Orlić,  
M.Sc. Chemistry, B.Sc. Environmental  
Science and Technology  
Executive Director

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.13: Learning diary - Reflection questions for students

In order to document their own learning process and competence acquisition, the students answered the following questions in their learning diary.

### **A) Before starting the Service-Learning programme:**

- What do I expect from myself?
- What do I expect from participating in the Service-Learning programme?
- What (learning) goals do I have?
- Do I have any questions, or do I need help/support?

### **B) During the Service-Learning programme:**

#### **1st Workshop "Sustainable waste management - Introduction"**

- What was new?
- What has raised my interest?
- What motivates me?
- Have I missed something?
- What learning progress have I made?
- Do I want to address this issue as part of the Service-Learning programme?  
Do I already have some ideas I would like to continue working on?
- What do I want to pay particular attention to at the next workshop?
- Do I need help/support?

#### **2nd Workshop "Sustainable tourism - Introduction"**

- What was new?
- What has raised my interest?
- What motivates me?
- Have I missed something?
- What learning progress have I made?
- Do I want to address this issue as part of the Service-Learning programme?  
Do I already have some ideas I would like to continue working on?
- What do I want to pay particular attention to in the next workshop?
- Do I need help/support?

#### **3rd Workshop "Organization of public events and work with the media"**

- What was new?
- What has raised my interest?
- What motivates me?
- Have I missed something?
- What learning progress have I made?
- Do I have any first ideas on how I would like to implement the interactive events/action projects of my Service-Learning programme?
- What do I want to pay particular attention to in the next workshop?
- Do I need help/support?

#### **4th Workshop "Planning of activities and events"**

- What was new?
- What has raised my interest?
- What motivates me?
- Have I missed something?
- What learning progress have I made?
- Am I satisfied with my idea for the public event? Why?
- Do I need help/support?

### Interim reflection

- What was new?
- What has raised my interest?
- What motivates me?
- Have I missed something?
- What learning progress have I made?
- Am I satisfied with the implementation of my service learning program? Why?
- Do I need help/support?

### *C) At the end of the Service-Learning programme:*

#### **5th Workshop "Conclusion and reflection of the Service-Learning programme"**

- What have I learned about myself?
- What new things have I learned?
- What was missing? What prevented/impaired the successful completion of tasks?
- What has helped? (success conditions)
- What am I satisfied with? What am I not satisfied with?

## Material 2.1.14: Intermediate reflection

### Sequence of the intermediate reflection:

1) Short presentation of the current status of group work and preparation of the public event:

- What happened in the last weeks after the 4th workshop?
- What is the current state of preparation of the public event?

2) Answers to the following questions in the individual groups (on cards):

- What has worked really well so far?
- What challenges did you face?
- What have we achieved in concrete terms?
- What didn't work out so well?
- What would we do differently in the next few weeks?
- Where do we need support/help?

Presentation of results with brief explanation.

3) Summary of positive aspects and explanation. Subsequently, discussion of the problem issues with the aim of finding a solution in the workshop or in an individual discussion with the groups/persons concerned.

4) Specification of the next steps (dates/meetings/activities).

5) Learning diary: Reminder of maintaining the learning diary. Discussion of any questions concerning the learning diary.

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**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

**Material 2.1.15: Schedule Workshop "Conclusion of the Service-Learning programme"**

**WORKSHOP PROGRAMME**  
**5th Workshop "Conclusion of the Service-Learning programme"**  
**22 September 2017**

Time	Content/exercise/activity
9:00 - 9:15	Welcome and presentation of the workshop programme
9:15 - 9:45	Presentation of the results of public events (students)
9:45 - 10:00	Learning diary - experiences with the reflection tool (students)
10:00 - 10:30	Reflection on the commitment in the field of environment and nature conservation (students) Presentation and discussion of the results
10:30 - 11:00	Reflection of the entire Service-Learning programme (students and lecturers) Discussion of the results in plenum and conclusions for further events
11:00 - 11:15	Answering the evaluation questionnaire
11:15 - 11:30	Break - change of location
11:30 - 12:30	Congratulations from Sunce and the participating lecturers, awarding of the certificates

**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.1.16: Reflection questions - Conclusion of the Service-Learning programme

Questions about the reflection of the Service-Learning programme during the final workshop

### 1) Learning diary - Experiences with the reflection tool (students):

- How was working with the learning diary for you?
- Was the learning diary helpful for your learning process? In what form?
- Would you work with the learning diary again? Why?

### 2) Reflection of the commitment in the field of environmental protection and nature conservation (students):

- Describe what you have learned from working with the environmental Association Sunce.
- What can you use that you have learned in your study or work situation? (Describe a concrete example.)
- What do you think you will continue to do in the future (in environmental protection and nature conservation)? How?

Presentation and discussion of the results.

### 3) Reflection on the entire Service-Learning programme (students and lecturers):

- What went really well?
- What exactly have you achieved?
- What should be different next time?
- What didn't work out so well?
- What challenges did you face?
- Where do you need support/help?

Presentation and discussion of the results. Conclusions for further events.

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**Source:** Association for Nature, Environment and Sustainable Development Sunce (2017).

## Material 2.2.1: Links to the curriculum

Course name	Workload	Specific learning objectives of the Service-Learning programme	Required proof of performance	Crediting of participation in the Service-Learning programme (ECTS-points)
Marketing management of non-profit organisations and public institutions (summer term)	Total course: 150h, out of that: - lecture: 30 h - tutorial: 30 h - preparation for the Service-Learning project: 30 h - exam preparation and exam: 60 h	Students learn to develop a marketing communications plan and to analyse a market structure, stakeholders and a marketing mix.	For the course: written examination as well as project development and presentation.  For the Service-Learning project: stakeholder and marketing mix analysis for the Marjan Forest Park.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The stakeholder and marketing analysis for the Marjan Forest Park was credited.
Marketing communication (summer term)	Total course: 150h, out of that: - lecture: 30 h - tutorial: 30 h - preparation for the Service-Learning project: 30 h - exam preparation and examination: 60 h	Students learn to develop a plan for an integrated communication strategy.	For the course: written review and development and presentation of the integrated communication strategy plan.  For the Service-Learning project: development and presentation of an integrated communication strategy plan for the Marjan Forest Park.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point The plan of an integrated communication strategy for the Marjan Forest Park was considered.
Environmental economics (summer term)	Total course: 150h, out of that: - lecture: 30 h - tutorial: 30 h - preparation for the Service-Learning project: 30 h - exam preparation and examination: 60 h	Students get to know the institutional structure of nature conservation management in Croatia.	For the course: written review and project development and presentation.  For the Service-Learning project: compilation of an overview of the websites of the relevant institutions, analysis of the survey and presentation of the results to other students and the lecturer.	Total course: 5 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The compilation of the web pages, the analysis of the survey and the presentation of the results were considered.
Specialized internship	Total course: 176h, out of that: - activities in the Service-Learning project (analysis of survey data and participation in the organisation of a seminar): 30h	Students acquire practical knowledge and experience in data analysis, the presentation of results and the organisation of events.	For professional practice: working hours in the Association Sunce as a non-university partner according to the obligations laid down in the contract between Sunce and the Faculty.  For the Service-Learning project: analysis of the survey data and participation in the organisation of a seminar as part of the "Responsible for Nature" project.	For the specialized internship: 6 ECTS-points, thereof for the Service-Learning programme: 1 ECTS-point > The analysis of the survey data and participation in the organisation of a seminar were considered.

Source: Association for Nature, Environment and Sustainable Development Sunce (2017).

# References & Links



## Introduction

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## About us

The **Association for Nature, Environment and Sustainable Development Sunce**, was founded in Split in 1998 in response to the growing social need for an independent expert committee dealing with environmental and nature conservation issues. Sunce has developed into one of the leading non-governmental organisations (NGOs) in the field of environmental and nature conservation, whose knowledge, skills and competences are recognised both at national and international level. Sunce is also committed to improving environmental and nature conservation standards, promoting public participation, actively contributing to the development of a responsible society and promoting awareness of networking and interdependence in nature. Sunce protects the interest and right of the public to a healthy environment and advocates a sustainable use of natural resources for the benefit of all citizens. Since its foundation Sunce has emphasized the importance of education and information for all generations regarding the necessity of environmental protection, nature conservation and sustainable development and implements educational activities in primary and secondary schools as well as the university through various projects. For this purpose, numerous educational materials have also been produced for pupils, students and teachers within the framework of other programmes of the Association.

**Gabrijela Medunić-Orlić**, Executive Director, Coordinator of the Environmental Protection and Sustainable Development Programme of the **Association for Nature, Environment and Sustainable Development Sunce**. In 1998 she graduated in chemistry from the Faculty of Natural Sciences and Mathematics in Zagreb. As part of her further education, she completed her bachelor's degree in environmental science and technology in 2005, which was exemplarily realised at the Faculty of Natural Sciences and Mathematics in Split in cooperation with the University of Molise (Italy). Since 2001 she has held various positions at Sunce (volunteer, freelancer, employee) until she took over the position of Executive Director and Coordinator of the Environment and Sustainable Development Programme in 2012. From the very beginning she was involved in the development and implementation of numerous educational activities of the Sunce association for primary and secondary school students as well as students on environmental protection, nature conservation and sustainable development. She is an editor and co-author of teaching materials (CD-ROM) on the topics of waste and biodiversity and the handbook on educational work with children and young people both at school and extracurricular activities "Sustainable Development - Understanding, Implementing and Creating". Promoting awareness of the role and responsibility of each individual citizen motivates her to initiate, develop and implement programmes of non-formal education for children and young people to promote ecologically responsible behaviour and social commitment.

**Dada Lerotić**, freelancer in the **Association for Nature, Environment and Sustainable Development Sunce**. She studied economics at the University of Applied Sciences in Split and German at the Christian-Albrechts-University of Kiel. She is a co-founder of the first Croatian environmental protection citizens' initiative "Split Green Action" (1988). From 2004 to 2007 she was in charge of the national educational project for primary school teachers "Protect your environment" of the Association for a Democratic Society (UDD) in Zagreb. The project was based on the brochure of the same name, which she wrote for the UDD in 2001. Since 2009, as part of the educational activities of the environmental Association Sunce, she has been leading workshops in primary schools in the Split-Dalmatia region on healthy nutrition and the responsible handling of waste, including composting of bio-waste in schools. From 2013 to 2015 she was involved in the project "Sustainable Development - A Qualification and Participation Project for Young People in Croatia" and from 2015 to 2018 in the project "Service Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students", which was carried out by Sunce in cooperation with the German Foundation for Environmental Education (DGU).

The **German Foundation for Environmental Education (DGU)** was founded in 1983 and promotes environmental education and education for sustainable development (ESD) as a pedagogically and

scientifically sound discussion of the natural, social and built environment. DGU wants to realize this intention primarily in the form of intensifying the direct environmental experiences of children, young people and adults. Fields of activity include the promotion of education and training in environmental education in the sense of ESD and the promotion of international cooperation, in particular with the “Foundation for Environmental Education” (FEE). DGU has a wide range of experiences in the implementation of content and methods of ESD.

**Stephanie Pröpsting, German Foundation for Environmental Education (DGU).** She studied educational science at the Westphalian Wilhelms-University of Muenster. During and after her studies she worked on various projects in the field of Education for Sustainable Development (ESD). Since 2005 she has been working as a research assistant at the Institute Futur of the Free University of Berlin and is currently coordinating the implementation of the project “StartGreen@School - Sustainable Start-up Culture at Schools”. Since 2009 Stephanie Pröpsting has been responsible for cooperation projects with environmental organisations from other European countries. From 2009 to 2011 she managed the project “Eco-Schools - environmental management with student participation” in cooperation with the Slovak environmental organisation Živica. In cooperation with the Croatian environmental organisation Sunce, she was in charge of the project “Shaping Sustainable Development - A Qualification and Participation Project for Young People in Croatia” from 2013 to 2015 and the project “Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students” from 2015 to 2018. As part of her project activities, she has developed various practice-oriented educational materials in the field of education for sustainable development.

## Acknowledgement

We would like to thank everyone who accompanied and supported us during the project and the preparation of the handout. We would especially like to thank all participating lecturers, without whose commitment and enthusiasm the project "Service Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students" and this handbook would not have been possible.

In particular, we would like to thank the following teachers from the participating faculties of the University of Split, who actively contributed to the implementation of the project:

### Faculty of Economics and Business Administration

- Slađana Pavlinović, Ph.D.
- Zoran Mihanović, Ph.D.
- Smiljana Pivčević, Ph.D.
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- Željka Trumbić, Ph.D.

Many thanks also to the employees/mentors of Sunce, without whose knowledge, experience, commitment and support of the students the Service-Learning programs would not have been successfully implemented: Margita Radman, M.Sc. Biology/Ecology, Tea Kuzmičić Rosandić, M.Sc. Biology/Ecology, both with additional training for teaching qualification (pedagogy - psychology - didactics - methodology) and Marija Nazlić, M.Ed. Biology/Chemistry, former employee of the environmental Association Sunce, currently assistant at the Faculty of Natural Sciences of the University in Split. Our thanks also go to all young, active volunteers who supported the environmental association Sunce in the successful implementation of the project activities. Many thanks also to all the students involved, without whose commitment and active contribution the programme would not have been possible. Through their learning, the environmental Association Sunce has also learned.

We would also like to thank the following institutions and companies making a visit possible for the students, as well as the employees for their commitment to the project:

- Hotel Split, Mladen Tomić (owner and managing director)
- Nature park Biokovo, Makarska, Velimir Vidak-Buljan (managing director)
- Waste disposal company Čistoća Ltd., Split
- Business DS Smith Unija Paper Ltd., Zagreb
- Primary school Kamen Šine, Split

We would also like to thank the following people and organisations from Germany for their profitable examples, experiences and suggestions:

- University of Erfurt, Prof. Dr. Alexander Thumfart
- Nature conservation school „Fuchsfarm“, Erfurt, Jens Düring
- University of Kassel, UniKasselTransfer, Dr. Imke-Marie Badur
- "Die Kopiloten e.V.", Kassel, Holger Klein and Maria Grüning
- University of Duisburg-Essen, "UNIAKTIV", Essen, Karsten Altenschmidt and Jörg Miller
- Leibniz Institute for Science and Mathematics Education of the University of Kiel, Prof. Dr. Kerstin Kremer
- "Phaenomena e.V.", Science Center Flensburg, Wolfgang Muth

Last but not least, we would like to thank the German Federal Environmental Foundation (DBU), the Croatian Ministry of Science, Education and Sport and the Fund for the Promotion of Environmental Protection and Energy Efficiency for financial support for the implementation of the project "Service Learning for Nature and Environmental Protection in Croatia - A German-Croatian Cooperation Project for Students", within the framework of which this handbook was developed, as well as the Croatian National Foundation for Civil Society Development, which supports the work of the environmental Association Sunce.

We are pleased to announce that the environmental Association Sunce has been successful with the new ESF project "PAZI! (practical - active - together - interdisciplinary!) – Service-Learning programme for Environment and Sustainable Development" to further support of Service-Learning and to promote the experience and knowledge gained beyond the borders of the University of Split. In this respect, we would like to thank all those who have recognized the importance of Service-Learning and are promoting the continuation of the Service-Learning programmes.

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*Sustainable development - understanding – implementing – creating*  
*Service-Learning - Engagement of students in nature and environmental protection*  
*Practical guideline for universities and non-profit organisations*



The guideline was created within the frame of the project “Service-Learning for Nature and Environmental Protection in Croatia - A German-Croatian cooperation project for students“ (2015-2018), funded by the German Federal Environmental Foundation (Deutsche Bundesstiftung Umwelt, DBU). The implementation of the project was also financed by the Croatian Ministry of Science, Education and Sports and the Environmental Protection and Energy Efficiency Fund.



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ENERGETSKU UČINKOVITOST

The work of the Association Sunce is financially supported by the Croatian National Foundation for Civil Society Development.

