COLLECTION OF BEST PRACTICES

WP 3.3 – General data

ACTIVITY 15 – Collection of best practices

Partner responsible for the result: LEAG
Dissemination level: PU - pubblica
Result description: Collection of best practices in the program area in terms of energy and climate

Table of contents

1 Good practices from PP1 RAFVG, Italy

1.1 Project AGRICS

GOOD PRACTICE	Country: ITALY
Title of the good practice:	AGRICS
Partner region:	Italy/Slovenia Friuli Venezia Giulia Region
Location data	Friuli Venezia Giulia Region

Key action:

- Mitigation

Description:

The AGRICS Project funded by the PSR 2014-2020 aims to develop an ICT platform for access to forecasting models and decision support systems in the agricultural and phytosanitary fields developed with the project, as well as for the visualization of some territorial scenarios of an agro-nature -meteorological (SAM).

It wants to carry out an experiment aimed at collecting data and validating the modelling applications and the decision support systems of the project.

The project also promotes the dissemination of the results of the ERSA experimentation consistent with the themes identified with the project and dissemination of the modelling applications of the project to favour their fruition and use on farms and the final recipients of the operation.
The final recipients of Measure 1, Sub-Measure 1.2 of the RDP and therefore of the AgriCS activities, are identified in the following topics:

- employees, owners, legal representatives and partners of companies operating in the agricultural or forestry sector or SMEs operating in the agro-food sector who are potentially eligible as beneficiaries of the RDP;
- the owners of agricultural and forest land located in Friuli Venezia Giulia;
- managers of forest areas located in Friuli Venezia Giulia;
- other public and private entities operating in the field of rural area management who are potentially eligible as beneficiaries of the RDP.

Performance indicators / action goals:

- creation of a modelling platform on phytosanitary but also agronomic aspects including the management of the irrigation resource in the company

Sector:

- Land use planning
- Agriculture & Forestry

Contact details to obtain further information on the practice	
Organization	ERSA - Regional Rural Development Agencies
Type of Organisation	Public
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GOOD PRACTICE	Country: ITALY
Website	http://www.ersa.fvg.it/cms/aziende/progetti/AgriCS/AgriCS-PSR-2014-2020-Regione-Autonoma-Friuli-Venezia-Giulia.html
Status of good practice (completed on date / in progress / planned):	Completed

1.2. Improvement of policies toward local voluntary carbon markets for climate change mitigation (Carbo Mark)

GOOD PRACTICE	Country: ITALY
Title of the good practice:	Carbo Mark - Improvement of policies toward local voluntary carbon markets for climate change mitigation
Partner region:	Italy Friuli Venezia Giulia Region - Central directorate for agriculture and forests
Location data	Friuli Venezia Giulia Region

Key action:

- Mitigation

Description:

CARBOMARK is a pilot initiative which has led to test a voluntary carbon market in Veneto and Friuli Venezia Giulia, as a means of strengthening European policies to fight climate change and to reduce greenhouse gas (GHG) emissions. This special market of "local dimension" – meaning the proximity of buyers and sellers – trades "carbon credits" which are intangible entities generated by activities that absorb carbon dioxide or avoid greenhouse gas emissions, among the main causes of global warming.

In each region the matching between suppliers and customers in the framework of the project is managed by the "Kyoto Observatories" (advisory desks), which have the function of organizing and promoting the carbon credit market. In particular, the carbon credit trade can be performed within a wide range of agro-forestry activities: forest management, urban forestry, wood and bio-char (charcoal made from different types of bio mass via pyrolysis) production. These activities involve forest owners, local authorities and SMEs.

More specifically the project aimed at:

- GHG mitigation, by encouraging carbon offsetting of local enterprises
- Income generation in less favoured areas, by estimating the value of the carbon sequestration service that forest ecosystems provide

Performance indicators / action goals:

- Creation of a local carbon market
- development of 10 carbon management plans by local enterprises
- set up of a Kyoto transregional observatory
- Trade of carbon credits from forest related activities
- set up of a domestic carbon standard - CarboMark a registered trademark

Sector:

- Agriculture & Forestry

GOOD PRACTICE	Country: ITALY
Contact details to obtain further information on the practice	
Organization	Veneto and Friuli Venezia Giulia Via Torino 110 30172 Mestre VE Italy
Type of Organisation	Public
Contact name	Lisa Causin
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Website	https://pdc.minambiente.it/en/area/temi/climate/carbomark-project
Status of good practice (completed on date / in progress / planned):	Completed

1.3. Project CE-HEAT- Use of waste heat

GOOD PRACTICE	Country: ITALY
Title of the good practice:	CE-HEAT Project
Partner region:	Italy Friuli Venezia Giulia Region - APE - Energy Agency
Location data	Friuli Venezia Giulia Region _APE

Key action:

- Mitigation

Description:

CE-HEAT project focuses on bringing to the fore the energy potential that is currently lost, due to the inaction to capture it. Current practices predominantly treat excess heat as waste rather than a resources. This “waste heat” occurs in almost all mechanical and thermal processes. The most significant amounts of waste heat are being lost in the industrial and energy generation processes. Waste heat recovery can lead to many advantages, first of all for the environment: a better use of energy can reduce fossil fuel consumption for power generation and the related emissions in the atmosphere. It is an opportunity for enterprises which could spend less money for buying energy, increasing their competitivity

Performance indicators / action goals:

- Manual for the estimation of regional waste heat potential in all partner regions and a manual for cadastre development together with guides on investment decision making (including waste heat energy calculator), funding opportunities for each region, relevant business models, permits related to infrastructure projects for each region and a link to the waste heat platform.
- Waste heat web-calculator to be applied to analyse four most common waste heat recovery technologies from both technical and economic perspective.
- Regional actions plan to use waste heat have been carried out in all partner regions.
- The transnational waste heat utilization platform is activated online or at https://www.waste-heat.eu/. The platform brings together all knowledge, tools, guidelines and best practice examples that enable learning and information exchange for users
- Friuli Venezia Giulia Energy Atlas http://www.atlanteenergetico.fvg.it/app/en

GOOD PRACTICE	Country: ITALY
Sector: ○ Industry ○ Energy • Local electrical production • Local heat/cold production ○ Waste heat	
Contact details to obtain further information on the practice	
Organization	33013 Gemona del Friuli (Italy) Via Santa Lucia, 19
Type of Organisation	Private
Contact name	Matteo Mazzolini
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Website	https://www.interreg-central.eu/Content.Node/CE-HEAT.html
Status of good practice (completed on date / in progress / planned):	Completed

1.4. Project ClimaParks- Data collection

GOOD PRACTICE	Country: ITALY
Title of the good practice:	ClimaParks
Partner region:	Italy Friuli Venezia Giulia Region - Parco regionale delle Prealpi Giulie Parco regionale delle Dolomiti friulane
Location data	Friuli Venezia Giulia Region
Key action: ○ Mitigation	
Description: The project aims at: • collect, analyse and compare data on the impact of climate change on the biodiversity of protected areas; • analyse the flow of visitors and adapt the management of the park, • develop pilot projects to create examples of good practice.	
Performance indicators / action goals: ○ Implementation of an energy plan ○ A final study on the effects of climate change on nature ○ Set up a visitor centre in Claut (Parco regionale delle Dolomiti friulane)	
Sector: ○ Mitigation	

GOOD PRACTICE	Country: ITALY
Contact details to obtain further information on the practice	
Organization	Parco regionale delle Prealpi Giulie, Parco regionale delle Dolomiti friulane
Type of Organisation	Public
Contact name	Antonio Andrich
e-mail	antonio.andrich@parcoprealpigiulie.it
Website	https://www.parcodolomitifriulane.it/en/park-institution-2/projects/climaparks/
Status of good practice (completed on date / in progress / planned):	Completed

1.5. Project Entrain

GOOD PRACTICE	Country: ITALY
Title of the good practice:	ENTRAIN Project Enhancing renewable heat planning for improving the air quality of the communities
Partner region:	Italy Friuli Venezia Giulia Region - APE - Energy Agency
Location data	Friuli Venezia Giulia Region

Key action:

- Mitigation

Description:

ENTRAIN wants to encourage the adoption of a systematic and efficient energy planning able to reduce the local carbon footprint, intensifying the use of RES. The two main goals: CO2 emissions reduction and the resulting improvement of the local air quality, alongside socio-economic benefits for local communities of the 5 key regions in Italy, Germany, Croatia, Slovenia, Poland.

Performance indicators / action goals:

- Entrain will facilitate and set up 9 local pilot district heating networks and 9 heating feasibility studies altogether with the development of 3 innovative financial schemes
- Analysis of the RES potential in the Autonomous Region of Friuli Venezia Giulia: https://www.interreg-central.eu/Content.Node/ENTRAIN/Regional-action-plan-FVG.pdf
- Training sessions for stakeholders of the heating sector https://www.youtube.com/watch?v=PSXWb31wDeg
- the adaptation and adoption of the Austrian "QM Holzheizwerke" quality management system

Sector:

- Energy
  - Local RES Local RES heat/cold production

Contact details to obtain further information on the practice

GOOD PRACTICE	Country: ITALY
Organization	33013 Gemona del Friuli (Italy) Via Santa Lucia, 19
Type of Organisation	Private
Contact name	Matteo Mazzolini
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Website	https://www.interreg-central.eu/Content.Node/ENTRAIN.html
Status of good practice (completed on date / in progress / planned):	Completed

1.6. Julian Alps Transboundary Eco Region

GOOD PRACTICE	Country: ITALY
Title of the good practice:	Julian Alps Transboundary Eco Region
Partner region:	Italy Friuli Venezia Giulia Region - Parco regionale delle Prealpi Giulie
Location data	Friuli Venezia Giulia Region
Key action: ○ Mitigation	
Description: The Eco Region aims at promoting for sustainable development Sustainable development involves the two parks in EU projects, e.g. EcoRegioAlpeAdria (ERA) project, which includes also the Nockberge Biosphere Reserve in Austria. This project aims to promote sustainable development in regions that share the same problems related to the marginality of the territory and to the difficulties caused by the mountains. The goal is to encourage diffusion of good practices and to strengthen transboundary cooperation to reach greater visibility not only in the local area. Working together and sharing experiences is a way to ap proach and manage common threats like biodiversity loss and climate change, and to promote both nature conservation and sustainable development. In this context special attention was recently paid to climate changes through an Interreg project named “Climaparks”. Together with other seven partners, initiatives concerning monitoring of plant and animal species and concrete actions to reduce the pressure of human activities on environment have been launched. Next step of the cooperation will be a common application for the European Charter of Sustainable Tourism in Protected Areas. Both protected areas see it as an extraordinary opportunity to develop the entire area.	
Performance indicators / action goals: ○ Common Application of the European Charter of Sustainable Tourism in Protected Areas	
Sector: ○ Protected areas	
Contact details to obtain further information on the practice	
Organization	Parco regionale delle Prealpi Giulie

GOOD PRACTICE	Country: ITALY
Type of Organisation	Public
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Website	https://www.europarc.org/news/2017/07/transparcnet-meeting-2017-changing-climate-changing-parks/ https://www.europarc.org/nature/transboundary-cooperation/discover-our-transboundary-areas/julian-alps-transboundary-ecoregion/
Status of good practice (completed on date / in progress / planned):	Ongoing

1.7. Project Prospect 2030

GOOD PRACTICE	Country: ITALY
Title of the good practice:	PROSPECT 2030
Partner region:	Italy Friuli Venezia Giulia Region - APE - Energy Agency
Location data	Friuli Venezia Giulia Region

Key action:

- Mitigation

Description:

The project focuses on good governance as the fundamental action to reduce CO2 emissions, boosting the energy transition towards a low-carbon economy. A dialogue with regional public authorities and local stakeholders is essential. The project aims at increasing awareness of the urgent need to adopt climate mitigation actions by involving regional public authorities in central Europe.

Performance indicators / action goals:

Capacity building workshops on Energy efficiency in Transport, energy planning and energy transition, renewable energy systems, buildings, energy grids and infrastructures, stakeholder engagement and the role of consumers
https://www.youtube.com/watch?v=8hYxFNwqdt8&list=PLXjrH8Kf0U-qhc55BL70f3FJO_PvU69JA

- Training activities addressed to stakeholders
- A Youtube channel https://www.youtube.com/channel/UCsDmNMYiSpoXrLqARs0KmFQ each region and a link to the waste heat platform
- Energy scenario assessment

Sector:

- Buildings
- Mobility & Transport
  - Private and commercial transport
  - Public transport
- Energy
  - Local electrical production
  - Local heat/cold production

GOOD PRACTICE	Country: ITALY
Contact details to obtain further information on the practice	
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Type of Organisation	Private
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Website	https://www.ape.fvg.it/prospect2030/
Status of good practice (completed on date / in progress / planned):	2019-2021

1.8. SMOOTH PORTS

GOOD PRACTICE	Country: ITALY
Title of the good practice:	SMOOTH PORTS
Partner region:	Italy Friuli Venezia Giulia Region - Comune di Monfalcone
Location data	Friuli Venezia Giulia Region

Key action:

- Mitigation

Description:

SMOOTHPORTS tries to engage stakeholders from administration, port related business' and logistic business' along the supply chain and aims to reduce CO2 emissions from port-related road traffic by improving regional policy instruments in a holistic manner.
To achieve these aims, SMOOTH PORTS wants to utilise the differences of the project partners' ports through an exchange of effective tools and best practices. A key focus lies on finding optimal procedures for the clearance of the goods that are so vital for society and commerce – making their processing speedy and avoiding unnecessary burdens on environment and people. A further focus will be on the different approaches regarding Information and Communications Technology solutions for various traffic related port activities as well as on the question what alternative fuels can power port activities in the future.

Performance indicators / action goals:

- Develop the Carbon footprint of Ports. Carbon footprint assessment follows national and international Guidelines for determining the environmental impact of the seaports, especially in relation to NOx, SOx, CO2, CO, N2O, CH4, PM10 e PM2.5.
- This methodology, which combines data from the Port monitoring platform, already operational, called MONICA (Monitoring and Control Architecture), with information from vessels and factories emissions. In this respect, the methodology ensures that both maritime as well as land operation are thoroughly assessed.
- Databases such as HIS Markit and the IMO ships emissions toolkit are used for retrieving information related to ships calling the seaports. Data for terminals and plants settled in the ports are calculated from operators' data. Knowing how much trucks and road traffic in

GOOD PRACTICE	Country: ITALY
general contribute to CO2 emissions is a power policy tool to better steer decision making towards a more sustainable approach. https://www.interregeurope.eu/policylearning/good-practices/item/4742/port-carbon-footprint-assessment-and-methodology/ ○ Develop and test the digital platform MYBOXPLACE in the Port of Hamburg. This is an intelligent solution to optimize the transport of empty containers by trucks. The digital platform MYBOXPLACE can be used by packers, forwarders, importers, exporters or container shipping companies. Traditionally, packers or forwarders have brought their import containers to an empty container depot after unpacking. The containers remained there until they were needed again by other logistic companies for their export activities. The process with MYBOXPLACE is much more streamlined. As the follow-up booking of the container happens directly and digitally, the container does not have to be transported to an intermediate storage depot and picked up again from there. The packer offers its unpacked import container as an available empty container online via the platform for a certain period. If another logistics provider reserves the container within the specified period, the container can be transported directly to the next user without an intermediate stop at the empty container depot. This direct exchange saves at least the transport to the container depot and therewith CO2 emissions accordingly. In the first year, the VIRTUAL DEPOT / MYBOXPLACE achieved a decrease of around 5.000 truck trips with empty containers in the Port of Hamburg and thus savings of approx. 41 tons CO2 emissions. ○ https://www.interregeurope.eu/policylearning/good-practices/item/4741/myboxplace/	
Sector: ○ Mobility & Transport • Private and commercial transport • Public transport	
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Type of Organisation	Public
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Website	https://www.interregeurope.eu/smoothports/good-practices/
Status of good practice (completed on date / in progress / planned):	Ongoing 2019-2023

2 Good practices from PP2 UniTS, Italy

2.1 Project AReTS- Trieste Water Network

GOOD PRACTICE	Country: ITALY
Title of the good practice:	AReTs Project - Trieste Water Network
Partner region:	Italy
Location data	Italy - Trieste

Key action:

- Mitigation

Description:

To sensitize the University community to responsible consumption of resources, the AReTS Project aims to stimulate users to drink tap water and at the same time aims to reduce the invasive and excessive use of plastic. It is implemented with the installation of microfiltered, sanitized and biologically pure "on tap" water dispensers inside the university buildings, starting with those of the main Campus in Piazzale Europa, according to a program based on the criterion of prioritizing buildings in which the presence of students is prevalent, and which considers the timing of the works to be started on numerous buildings in the short and medium term (2-4 years). The dispensers will be part of the set-up, in the various buildings, of green corners which are intended as points of awareness as regards the issues of environmental sustainability (where bins for the differentiation of waste and dissemination material of initiatives for sustainability will also be set up). The AReTS Project is completed with the production of customized UniTs water bottles, which can be supplied to each registration number upon first registration with UniTs.

Performance indicators / action goals:

- The goal is to carry out the following dispenser installation plan:
  - period 2020/21:
  - Building H3: 2
  - Building A: 2
  - Buildings C8-C9: 1
  - Building F: 1
- period 2021/22
  - Via Alviano building - Polo Gorizia: 2
  - Building B: 1
  - Building C11: 2
  - H2-H2 bis building: 1
  - Building M: 1
  - Block C- SG: 1
- period 2022/23
  - Building C7: 1
  - Building C5-C2-C3: 2
  - Blocks F1-F2 - SG: 2
  - Block Q SG - 1
  - Block O SG - 1

Sector:

- Water
- Waste

Contact details to obtain further information on the practice

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Type of Organisation	Public
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Status of good practice (completed on date / in progress / planned):	Completed and in progress

2.2 Installation of photovoltaic systems

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Installation of photovoltaic systems
Partner region:	Italy
Location data	Italy - Trieste - University district of p.le Europa
Key action: ○ Mitigation	
Description: Over the years, the following interventions for the installation of photovoltaic systems have impacted the university buildings in the district of p.le Europa: building B: 19kWp plant activated in 2009 building C6: 4 kWp plant activated in 2020 building A: 318 kWp plant in the activation phase	
Performance indicators / action goals: ○ In 2020, 30,132 kWh were produced, equal to a reduction in CO2 emissions of 13,053 tons	
Sector: ○ Energy • Local electrical production	
Contact details to obtain further information on the practice	
Organization	University of Trieste
Type of Organisation	Public
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Website	https://www.units.it/
Status of good practice (completed on date / in progress / planned):	Completed and in progress

2.3. Improvement of the thermal insulation of the building envelope

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Improvement of the thermal insulation of the building envelope
Partner region:	Italy
Location data	Italy - Trieste
Key action: ○ Mitigation	
Description: Realization of work to replace windows and doors and thermal insulation of the building casings of university buildings, provided for in the Three-Year Plan of Public Works.	
Performance indicators / action goals: ○ The objective is the execution of the following work plan: ○ Ed. B - window replacement - € 500,000 - early 2022 ○ Building C1 - windows replacement - € 1,406,000 - early 2023 ○ Building F - completion of window replacement - € 620,000 - early 2023 ○ Ed A central body - windows replacement - € 1,330,000 - early 2021 ○ Buildings C5 - thermal insulation of the building envelope - € 2,418,600 - early 2021	
Sector: ○ Buildings • Tertiary buildings (non-municipal equipment/facilities)	
Contact details to obtain further information on the practice	
Organization	University of Trieste
Type of Organisation	Public
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Status of good practice (completed on date / in progress / planned):	Completed and in progress

2.4. Project MUSE – Use of electic vehicles, micro grids and renewable energy production

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Mobility energy efficiency works with the use of electric vehicles, micro-grids and production of energy from renewable sources at the University of P. le Europa n. 1 - Trieste (MUSE project).

GOOD PRACTICE	Country: ITALY/SLOVENIA
Partner region:	Italy/Slovenia
Location data	Italy - Trieste
Key action: ○ Mitigation	
Description: A charging station for electric vehicles (2 stations for cars and 2 for bikes) with a power of 4 kWp connected to the network and powered by photovoltaic panels located on the roof of the university buildings was constructed at the p.le Europa area.	
Performance indicators / action goals: ○ The goal is to increase the number of charging stations for electric vehicles, by joining the NOEMIX project and further initiatives.	
Sector: ○ Buildings ○ Mobility & Transport ○ Energy • Green public procurement	
Contact details to obtain further information on the practice	
Organization	University of Trieste
Type of Organisation	Public
Contact name	Roberto Vergine - Department of Engineering and Architecture
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Website	https://www.units.it/
Status of good practice (completed on date / in progress / planned):	Completed and in progress

2.5. Reduced energy consumption

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Reduced energy consumption
Partner region:	Italy
Location data	Italy - Trieste
Key action: ○ Mitigation	
Description: Adherence to the Consip Integrated Energy Service 3 contract which provides for the reduction of energy consumption (25% for thermal energy and 20% for electricity) starting from the second contractual year through the implementation of energy efficiency works The interventions can be summarized as follows:	

GOOD PRACTICE	Country: ITALY/SLOVENIA
• Electrical systems (relamping with replacement of traditional lighting bodies with the same number of LEDs in buildings A, B, C1, C8, C9, C11, H2, H2bis, H3, Campo Marzio, via Filzi, Polo Universitario Goriziano); • Thermal systems (UTA engine replacement ed.C11, redevelopment of thermal power stations and substations in via Zanella - via Lazzaretto 6 and 8 - former OPP district - androna Baciocchi - via Filzi - Goriziano University Center - via Tigor - via Università 1), • Redevelopment of distribution substations of the district heating ring of the p.le Europa district, • Installation of the Building Management System at the service of buildings B, C11, Q, via Zanella, building W, via Lazzaretto 6-8, androna Campo Marzio 10, via Tigor 22, Goriziano University and Conference Center;	
Performance indicators / action goals: ○ Reduction of energy consumption (25% for thermal energy and 20% for electricity).	
Sector: ○ Buildings ○ Energy • Green public procurement • Local electrical production • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	University of Trieste
Type of Organisation	Public
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Status of good practice (completed on date / in progress / planned):	Completed and in progress

2.6. Project Smart Campus

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	SMART CAMPUS and S3UNICA “Smart SpecialiSation UNIvercity CAmpus” - INTERREG EUROPE
Partner region:	Italy/Slovenia
Location data	Italy - Trieste
Key action: ○ Mitigation	
Description: The project plans to capitalize on the experience of the Smart Campus project (from which a first lot has been created to measure the electricity consumption of the medium voltage Campus ring. A second lot is being planned) to improve the efficiency energy of the buildings and other	

GOOD PRACTICE	Country: ITALY/SLOVENIA
infrastructure of the University Campus, promoting symbiosis with the regional territory and the development of innovative solutions along the entire value chain in the area of energy-saving and smart grid developments: a common methodology will be defined, using the new directive on energy performance of buildings and its intelligent availability indicator. Step 1: identification and analysis. A self-assessment tool that allows regional stakeholders to identify their strengths and weaknesses across the innovation cycle, policy framework, technology, and financial results. Step 2: interregional mutual learning S3UNICA will organize events for the sharing of experiences (EE) in each region. Each partner will focus on strategies, technical solutions, the policy framework and ecosystem of the host region, to increase smart energy savings, distribution and production measures, as well as methods, resources, results and experience during the innovation cycle. Step 3: knowledge transfer and action plans. S3UNICA will disseminate key lessons learned from S3UNICA partners' rich experience in meetings, start coding tools and implement policy methods, and develop an interregional ecosystem to support the growth of transnational markets.	
Performance indicators / action goals: ○ The goal is to develop a University smart grid with a low environmental impact that is capable of integrating generation plants from renewable sources with storage systems and charging stations for electric vehicles, controlled by an "intelligent" automatic system that allows active management of the various components of the electricity network, to optimize their operation and reduce energy consumption.	
Sector: ○ Buildings ○ Mobility & Transport ○ Industry ○ Energy • Local electrical production	
Contact details to obtain further information on the practice	
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Type of Organisation	Public
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Status of good practice (completed on date / in progress / planned):	Completed and in progress

3 Good practices from PP3 AREA

3.1. Upgrading of public lighting installations

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Upgrading of public lighting installations
Partner region:	Italy
Location data	Municipality of Trieste
Key action: ○ Mitigation	
Description: The public lighting systems have been updated by replacing obsolete lamps with the best luminous efficiency lamps available on the market. In 2012 the use of LED lamps to replace sodium vapor lamps was proposed to the municipal administration and in this sense the activities were developed with the replacement of the lighting systems of the city of Trieste. Electricity consumption decreased from 22,945 MWh in 2001 (SEAP 2014 data), to an average of 17,960 MWh for the 2009-2011 three-year period (2014-2011 SEAP figure), to an average of 14,855 MWh for the 2010-2012 three-year period (I SEAP Implementation Report), to an average of 12,221 MWh for the five-year period 2012-2016 (figure II SEAP Implementation Report), to an average of 12,609 MWh for the five-year period 2014-2018 (figure III SEAP Implementation Report) to an average of 13,136 MWh for the five-year period 2015-2019 and specifically equal to 13,518 MWh for the year 2019.	
Performance indicators / action goals: ○ Energy saving: 9,427 MWh ○ Reduction of CO2 emissions: 4,440 tCO2	
Sector: ○ Public lighting	
Contact details to obtain further information on the practice	
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Type of Organisation	Public
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Status of good practice (completed on date / in progress / planned):	Completed

3.2. Installation of charging stations for electric vehicles

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Installation of charging stations for electric vehicles
Partner region:	Italy/Slovenia
Location data	Municipality of Trieste

Key action:

- Adaptation
- Mitigation

Description:

The installation of charging columns for electric and plug-in hybrid vehicles began on 13.3.2015. 16 columns have been installed, for slow or fast electric charging of the vehicle and they can operate at the same time. The sockets are equipped with a locking system that prevents accidental disconnection during recharging and access is allowed following identification of the customer by means of an RFID card or dedicated app. The total is 33 sockets for a total power of 535.6 kW, of which 11 SCAME Type 3a (Low Power), 19 of Type 2 (Socket only), 1 of Type 2 (CCS), 1 of the CHAdeMO type, 1 of Type 2 (Tethered Connector). Area Science Park has equipped itself with 4 charging stations, 2 installed in May 2018 in the Padriciano district, and 2 in November 2019 in the Basovizza district, with powers of 7.4 and 22 kW in the single district. In the Padriciano district there is also an Enel X EVA + charging station, with 2 electrical sockets that allow fast charging in direct current, with a power of 50 kW, and 1 alternating current outlet, of 43 kW.

Performance indicators / action goals:

- Reduction of CO2 emissions: 35.7 tCO2
- (The difference between the emissions that would have occurred with the use of traditional vehicles and the emissions deriving from the production of electricity with traditional methods for recharging electric vehicles). This reduction in emissions could be higher if the electricity supplied by the columns were certified green.

Sector:

- Mobility & Transport
  - Private and commercial transport

Contact details to obtain further information on the practice	
Organization	Municipality of Trieste - AcegasApsAmga SpA - Enel X - Area Science Park
Type of Organisation	Public and Private
Contact name	Silvia Fonzari Fabio Morea
e-mail	silvia.fonzari@comune.trieste.it gsantoro@acegasapsamga.it fabio.morea@areasciencepark.it
Website	https://www.comune.trieste.it/ https://www.acegasapsamga.it/ https://www.enelx.com/it/it https://www.areasciencepark.it/

GOOD PRACTICE	Country: ITALY/SLOVENIA
Status of good practice (completed on date / in progress / planned):	Completed

3.3. Installation of photovoltaic systems on private buildings

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Installation of photovoltaic systems on private buildings with the national incentive mechanism called "Conto Energia"
Partner region:	Italy
Location data	Municipality of Trieste

Key action:

- Mitigation

Description:

In 2001, the reference year, there were no photovoltaic systems in the municipal area; the distribution of this technology began in 2007 with the introduction of the "Conto Energia" incentives.
The trend of the installed photovoltaic power and the relative estimated production of electricity is reported, considering both the plants that have used the "Energy Accounts", and those adhering to the "Exchange On Site" (SSP) mechanism and those adhering to the "Dedicated Withdrawal" (RID) system.

	2007	2008	2009	2010	2011	2012	2013
numero impianti installati nell'anno	8	27	67	80	233	218	120
numero impianti cumulativo	8	35	102	182	415	633	753
potenza installata nell'anno [kW]	64	192	353	1.367	11.520	1.128	495
potenza installata complessiva [kW]	64	256	608	1.976	13.495	14.623	15.118
produzione energia [kWh]	75.125	301.564	717.892	2.331.233	15.924.464	17.255.412	17.839.805
produzione energia elettrica da impianti fotovoltaici [MWh]	**75**	**302**	**718**	**2.331**	**15.924**	**17.255**	**17.840**

Performance indicators / action goals:

- Production of electricity from renewable sources achieved: 17,712 MWh
- Reduction of CO2 emissions: 8,342 tCO2

Sector:

- Energy
  - Local electrical production

Contact details to obtain further information on the practice	
Organization	Municipality of Trieste - GSE SpA Energy Services Manager
Type of Organisation	Public
Contact name	Energy Services Manager - GSE S.p.A.
e-mail	gsespa@pec.gse.it
Website	https://www.gse.it/chi-siamo/performance/conto-energia
Status of good practice	Completed

GOOD PRACTICE	Country: ITALY/SLOVENIA
(completed on date / in progress / planned):	

3.4. Installation of solar thermal systems on public buildings

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Installation of solar thermal systems on public buildings
Partner region:	Italy
Location data	Municipality of Trieste
Key action: ○ Mitigation	
Description: As part of the integrated energy / plant management and supply contract, the Municipality of Trieste has built solar thermal plants on the roof of 14 buildings. The buildings are divided as follows according to their intended use: 6 schools, 2 sports facilities, 1 retirement home, the remaining buildings have other intended uses. Altogether 64 panels were installed for a total area of 156 square meters. The smallest plant is 2 square meters in size, the largest nearly 28 square meters. These systems provide 80% of the domestic hot water needed by the structures, assuming an average annual irradiation value of 1,600 kWh / m2 and an average annual efficiency of solar systems equal to 30%, an overall energy input is estimated heating from renewable sources equal to 75,000 kWh / year.	
Performance indicators / action goals: ○ Energy saving: 75 MWh ○ Reduction of CO2 emissions: 18tCO2	
Sector: ○ Energy • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	Municipality of Trieste
Type of Organisation	Public
Contact name	Enrico Conte
e-mail	enrico.conte@comune.trieste.it
Website	https://www.comune.trieste.it/
Status of good practice (completed on date / in progress / planned):	Completed

3.5. Improvement of the energy performance of the "Pineta del Carso" Nursing Home

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Improvement of the energy performance of the "Pineta del Carso" Nursing Home
Partner region:	Italy
Location data	Municipality of Duino - Aurisina
Key action: ○ Mitigation	
Description: The objective of the action was to improve the energy performance of the nursing home, achieving economic savings and a reduction in emissions. From 2008 to 2013, the administration of the Pineta del Carso carried out a series of interventions to improve the energy efficiency of the structure, as described below: • replacement of about 60% of external windows; • lighting replacement intervention - where we intervene to do extraordinary maintenance and install LED luminaries; • installation of thermostatic valves on radiators. An improvement was noted both in terms of reductions in the consumption of natural gas and electricity. It will be important to keep future consumption for cooling under control. This trend will increase in future years.	
Performance indicators / action goals: ○ Energy saving: 76.3 MWh ○ Reduction of CO2 emissions: 15.4tCO2	
Sector: ○ Buildings • Tertiary buildings (non-municipal equipment/facilities) ○ Energy • Green public procurement • Local electrical production • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	2015 Policlinico Triestino S.p.A.
Type of Organisation	Private Accredited
Contact name	Technical Office "Pineta del Carso nursing home"
e-mail	polits@pec.it
Website	/
Status of good practice (completed on date / in progress / planned):	Completed

3.6. Autonomous condensing boilers that have benefited from 55%

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Autonomous condensing boilers that have benefited from 55%
Partner region:	Italy
Location data	Program Area - Municipality of Parma
Key action: ○ Mitigation	
Description: The precise information about the number of interventions carried out and on the savings obtained are not easily available with the monitoring tools implemented up to now by the Municipal Administration. However, the data on the 55% tax relief were provided on a regional scale by ENEA for the years 2007, 2008, 2009, 2010 and 2011. It is therefore possible to estimate the data on a municipal scale, applying a proportionality coefficient based on the population. This sheet considers the replacements of boilers in homes with autonomous gas systems (approximately 54,939 boilers) taking into account both the boilers that have benefited from the 55% deduction and those that have taken place with high-efficiency boilers. It is therefore estimated that about 22,887 boilers (42% of the total boilers) were replaced in the period considered, of which 3% condensing.	
Performance indicators / action goals: ○ Energy saving: 19,990 MWh ○ Reduction of CO2 emissions: 4,000 tCO2	
Sector: ○ Buildings • Residential buildings	
Contact details to obtain further information on the practice	
Organization	Organization address
Type of Organisation	Public/private
Contact name	Environment and Energy Sector - SO Seismic-Energetics and Energy
e-mail	e.bertolotti@comune.parma.it
Website	https://www.comune.parma.it/comune/Paes.aspx
Status of good practice (completed on date / in progress / planned):	Completed

3.7. Construction of green roofs and walls

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Construction of green roofs and walls
Partner region:	Italy
Location data	Municipality of Livorno
Key action: ○ Adaptation	
Description: The intention is to encourage the creation of green roofs on both flat and pitched roofs. Depending on the characteristics of the soil and the type of vegetation, it can retain a share of rainwater between 30% and 90%. Green roofs make it possible to at least partially restore the natural water cycle as they favor evapotranspiration and infiltration, reducing surface runoff and gradually releasing captured rainwater. The intervention involves: a) Include in the building regulations the possibility of building green roofs and walls in new buildings and in reconstructive renovations; b) Verify the admissibility of incentive measures for the construction of green roofs and vertical walls within the NNTTA of urban plans at various planning levels (eg OP, implementation plans, regeneration and urban redevelopment interventions); c) c) identify one or more public buildings to be equipped with a green roof.	
Performance indicators / action goals: ○ Mitigation of flooding phenomena in the summer heat through structural interventions for the construction of green roofs	
Sector: ○ Buildings ○ Water	
Contact details to obtain further information on the practice	
Organization	Municipality of Livorno
Type of Organisation	Public
Contact name	Dr. Alessio Tanda
e-mail	atanda@comune.livorno.it
Website	www.comune.livorno.it/
Status of good practice (completed on date / in progress / planned):	Scheduled

3.8. Smart water network

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Smart water network
Partner region:	Italy
Location data	Municipality of Ferrara

Key action:

- Adaptation

Description:

A close collaboration between the Municipal Administration, the world of research and the managing body (Hera SpA) is necessary to increase the resilience of the water network with respect to climate change. The intervention primarily includes interventions, also of an infrastructural type, on the Aqueduct and Sewerage. In particular, these are primarily interventions aimed at reducing the consumption of water resources, through the research and monitoring of leaks, ordinary and extraordinary maintenance activities and the adoption of sustainable behavior by users. Secondly, interventions will be carried out aimed at preserving the quality of the water resources, through the correct disposal of wastewater and the management of sewage networks.
Actions:

- network loss reduction activities;
- adaptation of the sewage system; all agglomerations between 200 and 2000 equivalent inhabitants will have to be connected to purification systems;
- reconnaissance activities on the authorizations for discharges in place in the territory of the Municipality of Ferrara;
- GST4Water project: technologies for real-time monitoring of indoor and outdoor water consumption, platform for processing and communicating water consumption to managers and users, systems for the management, recovery and reuse of rainwater and gray water building scale, tools for assessing the economic and environmental sustainability of urban water systems.

Performance indicators / action goals:

- Improve the resilience of the water network from a structural and management point of view

Sector:

- Water
- Waste

Contact details to obtain further information on the practice	
Organization	Municipality of Ferrara
Type of Organisation	Public
Contact name	Eng. Roberto Mauro
e-mail	roberto.mauro@comune.fe.it
Website	https://www.comune.fe.it/
Status of good practice	Ongoing

GOOD PRACTICE	Country: ITALY/SLOVENIA
(completed on date / in progress / planned):	

4 Good practices from PP5 IUAV, Italy

4.1. Hotel Parentium

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Hotel Parentium
Partner region:	Croatia
Location data	Poreč, Istria

Key action:

- Mitigation

Description:

Hotel Parentium was build in 1967, the first major adaptation was in 1987 and the next one in 2014. It has a net area of 20.582m2 and 538 beds. The building needs 2.900kW for heating and 1.350kW. The heat pumps have a 1380kW cooling capacity and 1590kW heating capacity.
Instead of energy piles, there are two exploitation wells and four discharge wells. This is an open system so that the sea water is pumped from the exploitation wells through heat exchanger and back to the discharge wells.
Through this action the renewable energy sources it uses, energy and cost savings, CO2 reduction and automatization. The same system provides both cooling and heating without additional costs. Using seawater for heating/cooling is natural in coastal areas and using such a system in hotels enables a more sustainable tourism and has less impact on the environment, which is a constant place of living for the local community.

Performance indicators / action goals:

- Heat pump
- sea water use for heating/cooling
- renewable energy

Sector:

- Buildings
  - Tertiary buildings (non-municipal equipment/facilities)
- Energy
  - Local heat/cold production
- Water
- Tourism

Contact details to obtain further information on the practice	
Organization	PLAVA LAGUNA d.d.
Type of Organisation	Public/private
Contact name	
e-mail	

GOOD PRACTICE	Country: ITALY/SLOVENIA
Website	https://www.plavalaguna.com/

4.2. Project Forestami

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Project Forestami
Partner region:	Italy
Location data	Milan

Key action:

- Mitigation

Description:

Forestami is a project that wants to involve all citizens who live and love the metropolitan city of Milan to mitigate the effects of climate change. Individuals, public bodies, associations and private companies: together to contribute with actions that have a positive impact on their own future and that of future generations.
The main goal is to plant 3 million trees in the territory of the metropolitan city of Milan - multiplying the number of plants along streets, squares and courtyards, on the roofs and facades of our homes - is the most effective, economical and engaging way to slow down global warming, reduce energy consumption, clean the air we breathe from fine dust, improving the well-being of citizens.

Performance indicators / action goals:

- Increase urban green areas
- Increase tree canopy cover by 5%
- Reduce air pollution
- Reduce energy consumption, enhancing the value of buildings
- Connecting green areas
- Redevelop neighbourhoods

Sector:

- Buildings
  - Municipal buildings equipment/facilities
  - Residential buildings
  - Tertiary buildings (non-municipal equipment/facilities)
- Energy
  - Green public procurement
  - Local heat/cold production
- Water
- Land use planning
- Agriculture & Forestry
- Environment & Biodiversity
- Health

Contact details to obtain further information on the practice

GOOD PRACTICE	Country: ITALY/SLOVENIA
Organization	Metropolitan City of Milan
Type of Organisation	Public
Contact name	Rossella Citterio (Communication Director)
e-mail	rossella.citterio1@gmail.com
Website	www.forestami.org
Status of good practice (completed on date / in progress / planned):	In progress

4.3. Catene park

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Catene park
Partner region:	Italy
Location data	Marghera (Venezia)

Key action:

- Adaptation
- Mitigation

Description:

Catene Park in Marghera (Venice) redefines an agricultural fragment of about 8 hectares interclosed in an urban area.
The project started from the existing hydraulic structure, maintaining the agricultural ditches, and confirming the corresponding vegetal plants.
More than 250 new trees have been planted including Ash, White Poplar, Elm, Cherry, Oak, Bagolari, and 280 Viburnum shrubs that with their white blooms will contribute to significantly mark the figurative layout of the park, together with four hectares of new flowering lawns, which have been realized with different characteristics: central clearings available for high frequentation and stable lawns with low maintenance costs on the embankments.
In the southern part of the park, about 6000 square meters of existing wet meadows have been maintained, which are a rare example of an ecotonal area in the anthropized area.
Irrigation is guaranteed by two circuits, one for the new unstructured trees, the other for the sprinkling of the lawns; the water supply is ensured by a collection tank for the meteoric wastewater coming from the drainage of the lawns.
The land used for the construction of the reliefs has been obtained from the excavation of the garages of the new side buildings.
The circulation is ensured by pedestrian and driveway surfaces made of fiber-reinforced concrete and stabilized earth on which other paths are grafted, consisting of gravel surfaces that, following the route of the existing agricultural channels, are designed as an integral part of the drainage system of micro-perforated pipes below.
A concrete platform, which houses two 5-a-side soccer pitches and a basketball court built on a synthetic surface, leads, through a slow climb, which flanks the new bowling alleys, to a panoramic

GOOD PRACTICE	Country: ITALY/SLOVENIA
terrace. From there you can reach the bar, services, and changing rooms buildings below, made of exposed concrete, which is closely related to the formal structure of the park.	
Performance indicators / action goals: ○ Collect rainwater for drainage grass and trees ○ Greening area ○ Mitigate climate	
Sector: ○ Water ○ Environment & Biodiversity ○ Health ○ Public green park + facilities	
Contact details to obtain further information on the practice	
Organization	CZstudio associati
Type of Organisation	Private
Contact name	Paolo Ceccon e Laura Zampieri
e-mail	info@czstudio.com
Website	www.czstudio.com
Status of good practice (completed on date / in progress / planned):	Completed in 2010

4.4. Joze Plecnik High School in Ljubljana

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Joze Plecnik High School in Ljubljana
Partner region:	Italy/Slovenia
Location data	Ljubljana
Key action: ○ Adaptation ○ Mitigation	
Description: Regional Development Agency of Ljubljana Urban Region reports about a new roof terrace garden at Jože Plečnik High School in Ljubljana, as a good example of a bottom-up, participatory green infrastructure project which can be implemented with few resources to bring many additional benefits. On one of the school's terraces a little roof garden was created through a series of successive workshops over six months. The terrace was designed to encourage the growth of many diverse plants whilst ensuring there is suitable space for students to socialise. In addition to the beds,	

GOOD PRACTICE	Country: ITALY/SLOVENIA
benches and storage space for maintenance equipment was incorporated into the plan. The planting design took into account the specific growing conditions on the roof, for example the exposure to the wind and the sun, drought and drying of the soil, as well as winter frost. This green terrace brings multiple benefits mostly on a local level, but it is nevertheless a part of the wider urban green infrastructure of Ljubljana. Regional Development Agency of the Ljubljana urban Region is actively searching for other good practices on a local, regional and national level to include into the Regional Green Infrastructure Strategy and consequently the Action Plan.	
Performance indicators / action goals: ○ Less overheating and temperature shocks in the building ○ Less surface outflow of meteoric water ○ Cleans the air and contributes to the amount of greenery ○ Higher level of urban biodiversity	
Sector: ○ Buildings • Municipal buildings equipment/facilities ○ Water ○ Environment & Biodiversity ○ Health ○ Civil protection & Emergency	
Contact details to obtain further information on the practice	
Organization	Pazipark, Cultural and Environmental Association
Type of Organisation	Public
Contact name	GAJA TRBIŽAN URŠKA KRANJC SARA ČOK
e-mail	pazipark@gmail.com
Website	http://www.pazipark.si/wp-content/uploads/BOOKLET_LITTLE-TERRACE.pdf
Status of good practice (completed on date / in progress / planned):	Completed in 2014

4.5. Rainwater saving and use in households

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Rainwater saving and use in households
Partner region:	Italy/Slovenia
Location data	Bremen
Key action: ○ Adaptation	

GOOD PRACTICE	Country: ITALY/SLOVENIA

Description:

The overall objective of actions taken by the city of Bremen is to establish a natural water balance and to reduce the rainwater discharge into the sewerage system, supporting its use.
The solution provided to improve rainwater use in Bremen household is a combination of technical and economic approaches and applies to all private property owners. Refund of rainwater fee: the property owner gets the rainwater fee (0.63 €/m2/year) refunded if rainwater use is applied or the ground is kept permeable, as the fee is calculated on the sealed area. For properties larger than 1,000 m2 the fee has to be split between rain and wastewater. Smaller properties can voluntary decide if such a split is feasible and convenient. In practice the larger the property is and the more water can be kept on the ground the more cost savings in comparison to sealed properties can be achieved.
Subsidies for the installation of the rainwater use system, a maximum of 12.000 Euros or a maximum of 1/3 of the total investment costs.
The solution is based on a cistern, that collect rainwater from roofs. The cistern, mostly located in the underground, may be constructed of various materials including reinforced concrete, precast concrete, fiberglass, or steel. The cistern supplies water to the household through a standard pressurized plumbing system. The rainwater can be used either for toilet flushing, but also for watering the garden. The installation of such systems in existing buildings requires adaptation of the piping system and some earthworks and is therefore sometime quite costly.

Performance indicators / action goals:

- Reuse of rainwater
- Reduction of soil sealing
- Water availability during drought periods.

Sector:

- Buildings
  - Residential buildings
- Water
- Waste
- Agriculture & Forestry

Contact details to obtain further information on the practice	
Organization	Municipality of Bremen
Type of Organisation	Public
Contact name	Andreas Bovenschulte (Mayor)
e-mail	info@bremen.de
Website	https://climate-adapt.eea.europa.eu/metadata/case-studies/rainwater-saving-and-use-in-households-bremen
Status of good practice (completed on date / in progress / planned):	In progress, since 2016

4.6. Sustainable Energy and Climate Action Plan

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Sustainable Energy and Climate Action Plan
Partner region:	Italy
Location data	San Donà di Piave

Key action:

- Adaptation
- Mitigation

Description:

"Sustainable Energy and Climate Action Plan" consists of two sections:

- climate change mitigation plan, which has the objective of reducing Co2 emissions from energy consumption in the entire geographical area of the city, planning actions both in the public and private sectors;
- climate change adaptation plan, which aims to increase the climate resilience of the territory, i.e. it's capacity to absorb climate disruptive factors. Adaptation is the ability to anticipate, prevent, avoid, minimize potential damage, and exploit any favourable opportunities.

The Plan consolidates and develops the 7 strategic fields of action:

1. Adapt the urban planning tools to the goals of the Covenant of Mayors;
2. Promote integrated measures for sustainable mobility;
3. Acting on the energy consumption of municipal property;
4. Develop e-government (Digital Administration);
5. Make green purchases for municipal services and supplies and consolidate green procurement;
6. Engagement;
7. Support an intense communication campaign.

Performance indicators / action goals:

- Application of high standards of energy efficiency in the municipal public sector;
- Energy saving measures in the residential sector;
- Measures of heating and cooling of buildings from renewable energy sources;
- Implementation of the Municipal Lighting Plan;
- Agreement with Veritas SPA for biomass;
- Private photovoltaic installations;

Sector:

- Buildings
  - Municipal buildings equipment/facilities
  - Residential buildings
  - Tertiary buildings (non-municipal equipment/facilities)
- Public lighting
- Energy
  - Green public procurement
  - Local electrical production
  - Local heat/cold production

GOOD PRACTICE	Country: ITALY/SLOVENIA
○ Water ○ Waste ○ Land use planning ○ Agriculture & Forestry ○ Environment & Biodiversity ○ Health	
Contact details to obtain further information on the practice	
Organization	Municipality of San Donà di Piave
Type of Organisation	Public
Contact name	Andrea Cereser (Mayor)
e-mail	protocollo@sandonadipiave.net
Website	https://www.sandonadipiave.net/myportal/C_H823/home
Status of good practice (completed on date / in progress / planned):	In progress

4.7. Vrijburcht multipurpose living-and-working complex

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Vrijburcht multipurpose living-and-working complex
Partner region:	Italy/Slovenia
Location data	Vrijburcht, Amsterdam
Key action: ○ Adaptation ○ Mitigation	
Description: Vrijburcht is a multipurpose living-and-working complex in Amsterdam. It offers many shared social amenities for both the residents and the people from the neighbourhood. The heart of the complex is the courtyard garden with trees, a vegetable garden, lawns, flowers, benches and a greenhouse. The garden provides various solutions to the expected impact of climate change; it offers residents a cool environment during warmer summers; rainwater is stored in underground tanks for irrigation in dry periods; the unsealed area permits maximum rainwater permeability. The complex was realized and financed through of a 'collective private commissioning'. Future residents jointly develop the project, which gives them maximum influence on the design but also includes carrying the risks related to the pre-financing and construction phase. The climate-proof courtyard garden was an integral part of the design of the complex and its features based on the wishes of the future residents. • Rainwater from the roof tops is collected in two tanks that are buried in the garden and can in total contain 6000 l of water. this water is used for irrigation of the garden and the plants on the surrounding terraces/balconies and covers the total irrigation needs in most of the years.	

GOOD PRACTICE	Country: ITALY/SLOVENIA
• The car parking garage is constructed under the building and the garden is paved minimally to create maximum permeability for rainwater in the garden. • Relief is created so that water flows from higher parts to a marsh-like environment. This prevents flooding of the garden and enhances vegetation diversity by creating dryer and wetter environments across the courtyard garden. • Drainpipes are detached from the facades at ground-floor level and together form a pergola construction for creeping plants. This minimizes the impact of eventual leakages on the facade. Creeping plants are also used at the exterior of the building where they cover wind screens to form green facades. • • The many trees in the garden provide shade and thus contribute to an agreeable microclimate on hot summer days.	
Performance indicators / action goals: ○ reduce flooding from extreme rainfall ○ heat stress during hot summer days	
Sector: ○ Buildings • Residential buildings ○ Energy • Green public procurement • Local electrical production • Local heat/cold production ○ Water ○ Waste ○ Land use planning ○ Environment & Biodiversity ○ Health ○ Civil protection & Emergency	
Contact details to obtain further information on the practice	
Organization	Vrijburcht Foundation
Type of Organisation	Private
Contact name	/
e-mail	/
Website	http://www.vlugp.nl/projecten/binnentuin-vrijburcht/ https://climate-adapt.eea.europa.eu/metadata/case-studies/vrijburcht-a-privately-funded-climate2013proof-collective-garden-in-amsterdam
Status of good practice (completed on date / in progress / planned):	Completed in 2007

4.8. Energy, Climate Change and Environmental Quality Plan (PECQ)

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy, Climate Change and Environmental Quality Plan (PECQ)
Partner region:	Italy/Slovenia
Location data	Barcelona
Key action: ○ Mitigation	
Description: The Energy, Climate Change and Air Quality Plan of Barcelona 2011-2020 (PECQ) is a local administration instrument aimed at the following during that time frame: • improving energy efficiency and reducing energy consumption in the city, • cutting the increase of greenhouse gas emissions (GHGs), • improving urban air quality, in particular with regard to NOx gases and PM10 particles, • improving the quality of energy supply.	
Performance indicators / action goals: ○ Conversion of urban elements into photovoltaic energy generators and implementation of new urban elements (pergolas) incorporating photovoltaics. ○ Creation of an online platform where citizens who sign up can consult their energy consumption, as well as receive information on how they consume, how much energy they consume compared to other users and receive advice on how to improve. ○ Generation of a solar thermal and photovoltaic map of Barcelona's buildings, with the aim of letting citizens know how much energy they can produce on their roofs and giving them the tools to promote installations.	
Sector: ○ Buildings • Municipal buildings equipment/facilities • Residential buildings • Tertiary buildings (non-municipal equipment/facilities) ○ Public lighting ○ Energy • Green public procurement • Local electrical production • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	Agencia Local de la Energía de Barcelona
Type of Organisation	Public
Contact name	Ada Colau i Ballano (Mayor) Cristina Castells (Main) Irma Soldevilla (Media)
e-mail	/

GOOD PRACTICE	Country: ITALY/SLOVENIA
Website	http://ajuntament.barcelona.cat/ecologiaurbana/ca
Status of good practice (completed on date / in progress / planned):	In progress

5 Good practices from PP7 GOLEA, Slovenia

5.1. Energy Rehabilitation of Public Lighting at Municipality of Komen (ESCO project)

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy Rehabilitation of Public Lighting at Municipality of Komen (ESCO project)
Partner region:	Slovenia
Location data	Komen municipality
Key action: ○ Mitigation	
Description: Energy consumption for public lighting per capita in Komen municipality was 110,52 kWh/year. 677 lights were replaced. The public lightning was not in conformity with the Decree on limit values due to light pollution of environment (it was mostly inappropriate and incorrectly installed). The municipality, which is investor and equipment owner, obtained non-refundable funds through the public call E3URE. The concessionaire/contractor (ESCO company) has, at take over process of managing of public lighting, paid to grantor (municipality) an abstraction fee in one off payment. Concession duration is 15 years, After the lightning replacement the consumption is 43,6 kWh/year/capita.	
Performance indicators / action goals: ○ Energy savings (MWh/a): 237 ○ CO2 savings (t/a): 130	
Sector: ○ Public lighting	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Boštjan Mljač
e-mail	bostjan.mljac@golea.si
Website	http://www.primorske.si/Novice/Srednja/Luci-bodo-varcnejse

GOOD PRACTICE	Country: ITALY/SLOVENIA
Status of good practice (completed on date / in progress / planned):	Completed

5.2. Setting up a charging station for electric cars and use of e-bicycles

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Setting up a charging station for electric cars and use of e-bicycles
Partner region:	Slovenia
Location data	Pivka, Divača, Miren-Kostanjevica and Šempeter-Vrtojba Municipality
Key action: ○ Mitigation	
Description: GOLEA has obtained 4 electric charging stations and 14 electric bicycles within the frame of AlterEnergy project (IPA Adriatic) and gave them in use to 4 Primorska municipalities (Pivka, Divača, Miren-Kostanjevica and Šempeter-Vrtojba). Electric charging stations was given in use to all citizens and tourists, as well as other visitors. The electric bicycles were given in use to municipal administration, museums, hotels, etc. At municipal level it represents the pilot intervention of electric vehicles use. It represents also a basis for electric vehicle introduction within the municipality fleet.	
Performance indicators / action goals: ○ Raising knowledge about sustainable transport and environmental protection regarding pollution with conventional transport.	
Sector: ○ Mobility & Transport • Municipal fleet	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Vanja Cencič
e-mail	vanja.cencic@golea.si
Website	https://www.golea.si/blog/2017/12/22/izjava-za-javnost-3-3-2/ https://www.energetika-portal.si/nc/novica/n/prvi-koraki-primorskih-obcin-na-poti-k-trajnostni-mobilnosti-3116/?tx_news_pi1%5B%40widget_0%5D%5BcurrentPage%5D=3&cHash=003e49e6490cb947fdf2cea13657d60f

GOOD PRACTICE	Country: ITALY/SLOVENIA
Status of good practice (completed on date / in progress / planned):	Completed

5.3. Solar power plant on noise barrier

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Solar power plant on noise barrier
Partner region:	Italy/Slovenia
Location data	Municipality of Šempeter-Vrtojba
Key action: ○ Mitigation	
Description: Within the project Renewable Energy Sources in Primorska Municipalities (financed by grants from the Swiss Contribution) the first major investment in the framework of project activities was an installation of a solar power plant: it is the first solar power plant in Slovenia, built on top of a highway noise barrier (a brownfield site). It is located just before the Bazara toll station in Vrtojba within Municipality Šempeter-Vrtojba. Technical characteristics: installed power -167 kWp, 644 of solar panels, length: 648 m, hight: 2,6 m.	
Performance indicators / action goals: ○ Electricity production (MWh/a): 196 ○ CO2 reduction (t/a): 110	
Sector: ○ Energy • Local electrical production	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Ivana Kacafura
e-mail	ivana.kacafura@golea.si
Website	https://www.golea.si/wp-content/uploads/2016/12/OVE_Brosura-final_SLO-ANG.pdf
Status of good practice (completed on date / in progress / planned):	Completed

5.4. Energy contracting for renovation of municipal buildings in the Municipality of Brda

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy contracting for renovation of municipal buildings in the Municipality of Brda
Partner region:	Slovenia
Location data	Municipality of Brda
Key action: ○ Mitigation	
Description: For the purposes of the energy-efficient refurbishment of three public buildings the Municipality of Brda received funding from the Cohesion Fund and from the program Swiss contribution for Dobrovo Elementary School and Kindergarten and Kojsko Elementary School and Kindergarten. For the comprehensive energy rehabilitation of municipal building there was no possibility to obtain any non-refundable grants. The municipality decided to carry out the renovation of all three buildings following the principle of contractual assurance of savings (EPC - Energy Performance Contracting) through energy service companies (ESCOs - Energy Service Company) selected on the basis of award procedures of the contract in accordance with the applicable legislation in this area. The concession contract is concluded for a period of 15 years.	
Performance indicators / action goals: ○ Energy savings (MWh/a): 255 ○ CO2 reduction (t/a): 185	
Sector: ○ Buildings • Municipal buildings equipment/facilities	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Rajko Leban
e-mail	rajko.leban@golea.si
Website	http://www.trajnostnaenergija.si/Trajnostna-energija/Var%C4%8Dujte/Energetsko-pogodbeni%C5%A1tvo/Potek-projekta-energetskega-pogodbeni%C5%A1tva
Status of good practice (completed on date / in progress / planned):	Completed

5.5. Implementation of energy management system in public buildings in Primorska region

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Implementation of energy management system in public buildings in Primorska region
Partner region:	Slovenia
Location data	23 municipalities across Primorska region
Key action: ○ Mitigation	
Description: GOLEA has introduced an energy monitoring and targeting within 218 public buildings. A monitoring and energy accounting and information system installed in public buildings enables GIOLEA to collect accurate and up-to-date data, including energy consumption at monthly level (on heat, electricity and water consumption, number of users, treated floor area, etc.). These data are used to set targets for energy reduction. Establishment of excellent cooperation between municipal administration and energy agency as their energy manager enabled prompt and efficient intervention for eliminating errors in energy use (for example: identification of inappropriate heat pump operation, reduction of excessed water use from automatic irrigation).	
Performance indicators / action goals: ○ Energy savings (MWh/a): expected up 10 % on heat energy consumption and up to 7 % on electricity consumption	
Sector: ○ Energy management within public buildings	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Tomaž Lozej
e-mail	tomaz.lozej@golea.si
Website	https://www.golea.si/wp-content/uploads/2019/01/Toma%C5%BE-Lozej-GOLEA.pdf
Status of good practice (completed on date / in progress / planned):	In progress

5.6. Biomass district heating in Miren-Kostanjevica

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Biomass district heating in Miren-Kostanjevica
Partner region:	Italy/Slovenia
Location data	Miren-Kostanjevica Municipality
Key action: ○ Mitigation	
Description: Realisation of micro district heating system fuelled by biomass in Miren which was the first such project in the Primorska region. The municipality selected a concessionaire that offered a lower price for heat than the municipality had paid for its facilities before. The wood chip district heating was realized in 2013 with the support of national non-refundable incentives, which covered 50%of investment costs. Two Froeling Turbomat 500 kW in Turbomat 220 kW boilers were installed. The district heating is supplying heat at reduced costs for public users as elementary school, kindergarten, municipal building and nearby private companies. The investment contributed also to the reduction of the atmosphere pollution by emissions as fossil fuels have been replaced by a renewable energy source.	
Performance indicators / action goals: ○ CO2 reduction (t/a): 294	
Sector: ○ Energy • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	GOLEA, Nova Gorica
Type of Organisation	Public
Contact name	Boštjan Mljač
e-mail	bostjan.mljac@golea.si
Website	https://www.primorske.si/2012/11/22/enako-toplo-bo-a-za-petino-manj-evrov
Status of good practice (completed on date / in progress / planned):	Completed

5.7. Cerkno geothermal educational trail

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Cerkno geothermal educational trail
Partner region:	Slovenia
Location data	Municipality of Cerkno
Key action: ○ Mitigation	
Description: The Municipality of Cerkno has a long tradition of exploiting geothermal energy. This is why the first geothermal educational trail in Slovenia was set here, as part of the EU project GRETA. The educational trail gradually leads us from the Earth's surface deeper and deeper into the ground, showing us the characteristics of geothermal energy at depths of 20, 100 and finally 2000 m below surface.	
Performance indicators / action goals: ○ Raising knowledge on different rock types that the deepest borehole penetrated at different depths. ○ Learning on how well rocks conduct heat and how to calculate the approximate amount of available of energy, and how to harness it.	
Sector: ○ Others: Education on EE and RES use	
Contact details to obtain further information on the practice	
Organization	Geological Survey of Slovenia
Type of Organisation	Public
Contact name	Joerg Prestor
e-mail	Joerg.Prestor@GEO-ZS.SI
Website	https://www.alpine-space.eu/projects/greta/20181130_geothermal-trail-brochures/brosura_greta_ang_zadnja.pdf
Status of good practice (completed on date / in progress / planned):	Completed

5.8. Energy renovation of kindergarten in Deskle

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy renovation of kindergarten in Deskle
Partner region:	Italy/Slovenia
Location data	Municipality of Deskle, Slovenia
Key action: ○ Mitigation	
Description: The kindergarten in Deskle was completely renovated in 2014. The following renovation works were carried out: thermal insulation of all facades, replacement of joinery, sealing of parapets, roof renovation, optimization of heating systems - installation of thermostatic valves, installation of ventilation systems with waste heat recovery and renovation and optimization of indoor lighting. The kitchen was also renovated (replacement of equipment and ventilation). The operation was partly funded by the EU Cohesion Fund. The operation is carried out within the Operational Program for the Development of Environmental and Transport Infrastructure for the period 2007-2013. The kindergarten renovation has improved the quality of the learning environment for children, suitable educational conditions were provided (before the renovation there were high heat losses), the heat consumption were reduced and consequently also the negative impacts on the environment.	
Performance indicators / action goals: ○ Energy savings (MWh/a): 70 ○ CO2 reduction (t/a): 15	
Sector: ○ Buildings • Municipal buildings equipment/facilities	
Contact details to obtain further information on the practice	
Organization	Deskle Municipality
Type of Organisation	Public
Contact name	Jurij Murovec
e-mail	jurij.murovec@obcina-kanal.si
Website	https://www.mojaobcina.si/kanal-ob-soci/novice/energetska-sanacija-vrtca-deskle.html
Status of good practice (completed on date / in progress / planned):	Completed

5.9. Installation of two solar-benches at the Marjan hill area in the city of Split

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Installation of two solar-benches at the Marjan hill area in the city of Split
Partner region:	Croatia
Location data	Marjan hill in the city of Split
Key action: ○ Mitigation	
Description: Smart benches are energy independent because they use power from solar panels, and all the processes are controlled with two processors that are built-in within the bench. The solar bench is resistant to shocks and can work 10 days without the sun. Carriage capacity of the bench is 300 kilograms and can hold up to four people. Each bench has four USB ports for cell phones and tablets, night lightning, CO2 control, air temperature display, 60 watts power, and can produce. Since launching the innovative product approx. 855 smart benches in 250 cities on 5 continents have been placed.	
Performance indicators / action goals: ○ Electricity power: 1 kW of electricity/daily	
Sector: ○ Others: smart municipal equipment	
Contact details to obtain further information on the practice	
Organization	City of Split
Type of Organisation	Public
Contact name	Hrvoje Matas
e-mail	hrvoje.matas@split.hr
Website	http://www.marjan-parksuma.hr/
Status of good practice (completed on date / in progress / planned):	Completed

5.10. Suburban train traction voltage change

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Suburban train traction voltage change
Partner region:	Poland
Location data	Grodzisk municipality
Key action: ○ Mitigation	
Description: Grodzisk co-owns a suburban electric train line with other municipalities located along its path. Up to 2016 the train was powered by 600V source with all its limitations. In 2016 a major change took place and both trains and their electric energy supply sources were converted to 3000 V, which significantly reduced energy loss related to transmission. The change did not produce a net energy saving though, as it made it possible to increase the number of trains in service. Still the result was a higher number of people served with the same operating cost.	
Performance indicators / action goals: ○ The service helps the network cope with large numbers of passengers who use the lines to commute to work and school. In the long-run, the project offers wider benefits in terms of improving the economic and social cohesion of the Warsaw conurbation, while increasing local people's opportunities in the labour market. As well as to reduce the environmental impact.	
Sector: ○ Mobility & Transport • Public transport	
Contact details to obtain further information on the practice	
Organization	Organization address
Type of Organisation	Public/private
Contact name	Michał Dobrzański
e-mail	michalmdobrzanski@gmail.com
Website	http://www.transport-publiczny.pl/wiadomosci/wkd-zmiana-napiecia-w-majowke-od-grudnia-wiecej-pociagow-51654.html
Status of good practice (completed on date / in progress / planned):	Completed

6 Good practices from PP8 LEAG, Slovenia

6.1 Electric storage battery Tesla from NGEN

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Electric storage battery Tesla from NGEN
Partner region:	Italy/Slovenia
Location data	Jesenice
Key action: ○ Mitigation	
Description: On October 10, 2019, the company NGEN opened the largest battery storage of electricity in the wider region in Jesenice. It is a battery from the American manufacturer Tesla and the company NGEN has developed a software solution that independently manages the devices included in the virtual power plant. The storage tank has a capacity of 12.6 megawatts and a capacity of 22.2 megawatt hours and allows us to install an additional 250 megawatts of clean electricity production. Power storage tanks are large batteries in which electricity is stored from the grid and then, when the need for it is greater, it is transmitted back to the grid. This is particularly important because electricity production and consumption are never coordinated. By increasing the production of energy from renewable sources, this alignment is even more difficult to achieve, as production depends on the weather. Energy storage, however, will allow for flexibility, while at the same time decentralizing the market, which is now still centralized. The investment cost 15 million euros.	
Performance indicators / action goals: ○ emergency power supply in the city in case of emergency (e.g. storm), ○ a new approach to balancing electricity on the Slovenian market .	
Sector: ○ Energy • Green public procurement • Local electrical production • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	NGEN, energetske rešitve d.o.o. Moste 26b, 4274 Žirovnica, Slovenija
Type of Organisation	Private
Contact name	Roman Bernard
e-mail	info@ngen.si
Website	https://www.ngen.si/en/solutions
Status of good practice (completed on date / in progress / planned):	October 2019

6.2. E-mobility in Kranj

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	E-mobility in Kranj
Partner region:	Slovenia
Location data	Kranj

Key action:

- Adaptation
- Mitigation

Description:

Since 2016, the Municipality of Kranj has been actively involved in e-mobility. They have already taken some action, among them:

- introduction of subsidized transport by city buses,
- exploitation of the largest network of electric bicycles in Slovenia
- free transport by electric vehicles Kranvaj.

The Municipality of Kranj also subsidizes public transport throughout the year. Residents and visitors of Kranj can ride in the transfer between city buses for the whole day for 1 euro. They also subsidize suburban traffic lines in the direction of Golnik. Recently, they have also set up a number of new bus stops with canopies in order to improve the accessibility and use of public transport. In cooperation with the city transport carrier, they are negotiating the purchase of electric buses and a bus adapted for people with reduced mobility in intercity traffic.

For the city administrations purposes, they replace the existing vehicle fleet with electric cars. By 2025, electric vehicles will also replace the fleets of all institutions in service operating in the area of the Municipality of Kranj. A large number of electric car chargers have been set up in the City's short strategies. Already in 2020, between 10 and 15 filling stations are planned, and by 2025 there should be as many as 50. Free on-call transport in Kranj is called Kranvaj. It is a mini electric bus (up to 6 persons and a wheelchair), who free ride in the pedestrian area. Kranvaj is friendly to the elderly, passengers with reduced mobility and anyone who needs help getting in and out of the vehicle. In 2018, Kranvaj carried 42,023 passengers in 364 days.

Performance indicators / action goals:

- Number of sustainable mobility measures in the framework of sustainable urban strategies,
- the use of electric cars will help reduce CO2 emissions.

Sector:

- Mobility & Transport
  - Municipal fleet
  - Private and commercial transport
  - Public transport
- Tourism

Contact details to obtain further information on the practice	
Organization	Municipality of Kranj Slovenski trg 1, 4000 Kranj
Type of Organisation	Public

GOOD PRACTICE	Country: ITALY/SLOVENIA
Contact name	/
e-mail	mok@kranj.si
Website	www.kranj.si
Status of good practice (completed on date / in progress / planned):	Finished by 2022

6.3. Project »GORENJSKA.BIKE«

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	»GORENJSKA.BIKE«
Partner region:	Italy/Slovenia
Location data	Gorenjska

Key action:

- Adaptation
- Mitigation

Description:

With the establishment of a bicycle rental network in 5 municipalities of the Gorenjska Košarica LAG area, the existing systems in the Kranj (KRsKOLESOM), Jesenice (JesNICE Bikes) and Bled (Bled Green ways) were upgraded. In the GORENJSKA.BIKE system there are now 28 stations in the Kranj municipality, 6 stations in the municipality of Jesenice, 5 stations in the municipality of Radovljica, 3 stations in the municipality of Tržič and 1 in the municipality of Naklo. A total of 245 bicycles are available, of which about 60% are with auxiliary electric drive (E-bike). Citizens can register in the system either online (www.gorenjska.bike) or via the MOBILN.SI smartphone application. Seasonal or monthly rental is possible. There is a choice of E-bike or ordinary bike. The operation joins the activities for the establishment of a comprehensive and orderly Gorenjska cycling network, which includes all 18 municipalities and neighboring Komenda, Kamnik, Vodice, Medvode, Logatec and Cerkno. "GORENJSKA.BIKE" is a product created within the operation FAST with BIKE within the funds CLLD 2014-2020 at the 1st public call of the LAG Gorenjska košarica. This is 80% co-financed by the European Regional Development Fund. The total value of the operation (net eligible costs + VAT) is € 533,582.88, of which the ERDF value is € 249,991.60 (80%).

Performance indicators / action goals:

- Development of sustainable mobility in the Gorenjska region,
- Impact on changing population habits and greater use of low-carbon transport and public transport.

Sector:

- Mobility & Transport
  - Municipal fleet
  - Private and commercial transport
  - Public transport
- Tourism

Contact details to obtain further information on the practice	
Organization	Zavod za šport Jesenice

GOOD PRACTICE	Country: ITALY/SLOVENIA
Type of Organisation	Public/private
Contact name	/
e-mail	info@gorenjska.bike
Website	https://www.gorenjska.bike/
Status of good practice (completed on date / in progress / planned):	Completed.

6.4. Operation - Cycling connections in Kranj 1-6

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Operation - Cycling connections in Kranj 1-6
Partner region:	Slovenia
Location data	Kranj

Key action:

- Adaptation
- Mitigation

Description:

The Municipality of Kranj complements and upgrades the missing cycling infrastructure in the length of 8.8 km with associated equipment, pedestrian areas, public lighting and drainage of meteoric water from newly built areas. They will also set up a Sustainable Mobility Center. The implementation of the Cycling Connections project in Kranj 1-6 will create better conditions for safer cycling, reduce the negative impacts of motorized mobility on the environment and increase the quality of life of the population. The level of motorization and dependence on cars is very high in Kranj, which is reflected in high road congestion, low throughput and consequently greenhouse gas and PM10 emissions. In accordance with the Integrated Transport Strategy of the Municipality of Kranj (MOK), cycling is defined as one of the five strategic pillars of the new MOK transport policy. The long-term goal of the MOK is to establish an integrated cycling network in the city area, which will accelerate the transition from motorized to a more sustainable form of daily population migration. The Sustainable Mobility Center will be intended to inform the population about the benefits of sustainable mobility and support cyclists (bicycle storage, basic bicycle inspection, information on the planning of daily sustainable routes). The projects of the Cycling Connection operation in Kranj 1-6 have already been completed, and the construction of the Center for Sustainable Mobility in Planina is in the final phase (statement of 23 July 2020). The result: nine kilometers of missing cycling and pedestrian infrastructure in individual neighbourhoods of Kranj and its surroundings. The total amount of funds intended for the implementation of the project is 2,192,460.94 €. The project was co-financed in the amount of 1,343,007.71 €.

Performance indicators / action goals:

- Number of sustainable mobility measures in the framework of sustainable urban strategies
- Reducing car use will help CO2 emissions reduction.

Sector:

- Public lighting

GOOD PRACTICE	Country: ITALY/SLOVENIA
○ Mobility & Transport • Municipal fleet • Private and commercial transport • Public transport ○ Tourism	
Contact details to obtain further information on the practice	
Organization	Municipality of Kranj Slovenski trg 1 4000 Kranj
Type of Organisation	Public
Contact name	/
e-mail	mok@kranj.si
Website	www.kranj.si
Status of good practice (completed on date / in progress / planned):	Planned completion: 2022

6.5. Pilot installation of submerged ecological islands (Phase 1)

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Pilot installation of submerged ecological islands (Phase 1)
Partner region:	Italy/Slovenia
Location data	Jesenice
Key action: ○ Mitigation	
Description: The Municipality of Jesenice has approached the regulation of submersible or. underground ecological islands for waste separation. 70% of such a container is located underground. As part of a pilot project as a gradual implementation of the changed method of separate waste collection. Containers for glass, paper and packaging were installed. As part of the investment, they also arranged road lighting, the purpose of which is to act preventively against improper disposal and vandalism. The main advantages of such containers are the saving of floor space occupied by containers, less unpleasant odors due to cold soil, smaller volume of separately collected waste (mass of waste by stacking on top of each other causes gravity compression and less emptying of containers). In June 2020, four submersible ecological islands were installed. The contractual value of the work performed on the first four submersible eco-islands amounted to approximately 78.000 €, which was financed by the Municipality of Jesenice from the environmental tax for waste disposal. Following the installation of submersible ecological islands in four locations, the ecological islands will now be redeveloped in five new locations (statement 3.8. 2020). The value of the second phase is not yet known.	
Performance indicators / action goals: ○ Tidy appearance of the settlement and protection of the environment	

GOOD PRACTICE	Country: ITALY/SLOVENIA
○ Smaller volume of separated waste	
Sector: ○ Public lighting ○ Waste	
Contact details to obtain further information on the practice	
Organization	Municipality of Jesenice Cesta železarjev 6 Jesenice
Type of Organisation	Public
Contact name	/
e-mail	obcina.jesenice@jesenice.si
Website	www.jesenice.si
Status of good practice (completed on date / in progress / planned):	Completed: August 2020

6.6. Project 2° Green Roof

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Project 2° Green Roof
Partner region:	Italy/Slovenia
Location data	Kranj
Key action: ○ Adaptation ○ Mitigation	
Description: Overheating of urban centers, polluted air, large amounts of rainwater and declining biodiversity are key environmental challenges of modern cities. Together with the lack of open green spaces, these problems have the greatest impact on health and quality of life in cities. In densely built-up areas, there is no longer room for new green areas to mitigate the negative environmental effects, so it is essential to green the existing structures. Buildings with flat roofs can be a good solution. What do "2°" mean in the name of the project? Research from Slovenia shows that the air temperature in the city in an area with a lot of greenery is up to 2° C lower than in an area where there is no greenery. With the 2° Green Roofs project, they want to encourage the greening of flat roofs and reduce the negative climate impact in cities. In this way, the inhabitants of the city of Kranj will get a new green urban area. Greening of flat roofs follows many Slovenian and European strategies in the field of energy efficiency, sustainable development and climate change. The project lasts two years (July 2019 - March 2021). The 2° Green Roof project is led by KD ProstoRož. The project is co-financed by the Eco Fund and the Ministry of the Environment and Spatial	

GOOD PRACTICE	Country: ITALY/SLOVENIA
Planning. The implementation of the project is also supported by the Municipality of Kranj. In the Primary school "Stane Žagar" in Kranj, which will get a green roof, the planting plan will be designed by teachers and students together with the architects of the non-profit studio Prostorož. They will try to connect the set of plants with the wishes and also with the curriculum. The green roof will measure about 360 m2. The Prostorož studio will monitor the condition of the green roof together with external experts until April 2021. The greening of flat roofs follows a number of Slovenian and European strategies in the field of energy efficiency, sustainable development and climate change. The value of the project is 40.000 €.	
Performance indicators / action goals: ○ Green roofs lower the temperature, retain precipitation, clean the air and have a positive effect on the health of residents, improve the thermal and sound insulation of buildings. ○ Analysis of the effects that the green roof will have on users and the environment.	
Sector: ○ Buildings • Municipal buildings equipment/facilities • Residential buildings • Tertiary buildings (non-municipal equipment/facilities)	
Contact details to obtain further information on the practice	
Organization	KD ProstoRož Rimska ulica 22 1000 Ljubljana
Type of Organisation	Public/private
Contact name	/
e-mail	info@prostoroz.org
Website	https://prostoroz.org/zeleno-streho-bo-dobila-obcina-kranj/
Status of good practice (completed on date / in progress / planned):	March 2021

6.7. Kindergarten Storžek

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Kindergarten Storžek
Partner region:	Italy/Slovenia
Location data	Preddvor
Key action: ○ Adaptation	
Description:	

GOOD PRACTICE	Country: ITALY/SLOVENIA
The passive house Kindergarten Storžek was built in 2012, using prefabricated timber facade elements (with 40 cm of thermal insulation), wooden triple glazing windows and central ventilation system. Total area of kindergarten is 1.500 m2 of usable area, outside playground, parking places and communication paths, all on the area of 8.500 m2. Building's energy for heating and hot water is produced in local biomass district heating system. There is also a 96 kW (peak power) solar power plant mounted on the roof of the building. Actual heat consumption is around 22 kWh/m2 for heating and 15 kWh/m2 for hot water. Annual electricity consumption is appx. 30 kwh/m2 (without energy for kitchen appliances). The actual yearly electricity production from solar power plant is around 45 kWh/m2. Even though building has a remarkable air tightness 0,2 it was shown that concentrations of CO2 were up to 5 times lower from those in conventional kindergartens. Total investment was 2,5 mio €, with included 420.000 € Eco fund grants.	
Performance indicators / action goals: ○ energy class B1, what means the use of energy in the range 15 – 25 kWh/m2	
Sector: ○ Buildings • Municipal buildings equipment/facilities ○ Energy • Local electrical production	
Contact details to obtain further information on the practice	
Organization	Municipality Preddvor Dvorski trg 10 4205 Preddvor Slovenia
Type of Organisation	Public
Contact name	/
e-mail	obcina@preddvor.si
Website	www.preddvor.si www.jelovica.si/otvoritev-pasivnega-vrtca-v-preddvoru.html www.youtube.com/watch?v=C7MsiaDrHAI&feature=youtu.be
Status of good practice (completed on date / in progress / planned):	Completed in 2012

6.8. ESCO Municipality Kranj - Olympic Swimming Pool

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	ESCO Municipality Kranj - Olympic Swimming Pool
Partner region:	Italy/Slovenia
Location data	Kranj

Key action:

- Mitigation

Description:

Starting with continuous data collection in 1999, Municipality of Kranj was the first Slovenian municipality to start cooperating with Energy contracting company (ESCO). The first stages of the project entailed energy supply contracting in 16 local buildings, that proved successful in more than 22% energy savings. In 2007, Kranj renovated the Olympic Swimming Pool, where 780,000 € was invested by a private ESCO. The results of the renovations added to a 50% reduction in heat consumption and 70% reduction in water consumption and 15% higher electricity consumption due to additional compressors and pumps. The reduction of CO2 is estimated to be 668.148 kg lower compared to years before the investment. Additional refurbishment followed in 2012 within the project REAAL (Renewable Energy Across the Alpine Land). New hydro and thermal insulation, new roof construction with 120 m2 of solar panels were installed within the project.

Performance indicators / action goals:

- 668 t less CO2 emissions
- 50% reduction in heat consumption
- 70% reduction in water consumption

Sector:

- Buildings
  - Municipal buildings equipment/facilities

Contact details to obtain further information on the practice	
Organization	Municipality of Kranj Slovenski trg 1 4000 Kranj
Type of Organisation	Public/private
Contact name	/
e-mail	mok@kranj.si
Website	www.kranj.si
Status of good practice	Completed

GOOD PRACTICE	Country: ITALY/SLOVENIA
(completed on date / in progress / planned):	

6.9. Energy efficiency workshops in primary schools

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy efficiency workshops in primary schools
Partner region:	Italy/Slovenia
Location data	Gorenjska region
Key action: ○ Mitigation	
Description: Energy refurbishment of schools and kindergartens plays an important role not only regarding energy savings but also as presenting new energy efficient technologies to youngsters. Teaching pupils why it is important to save energy, explaining the difference between renewable and non-renewable energy sources and demonstrating ways to lower energy consumption are key steps for sustainable society. It is also important to show to pupils and teachers how new technologies works and what are the benefits. Sometimes users of the refurbished buildings are not in favour with new technologies. Workshops try to present the pupils what energy is, how it is conserved and converted from one form to the other and why we need appliances and machines. Furthermore, we try to explain the connection between energy consumption of the building, building's characteristics, climate and users influence.	
Performance indicators / action goals: ○ Over 12 visited schools per year. ○ Over 800 primary school students involved.	
Sector: ○ Others - soft measures, education	
Contact details to obtain further information on the practice	
Organization	Local energy agency of Gorenjska Stara cesta 5 SI-4000 Kranj
Type of Organisation	Public
Contact name	/
e-mail	info@leag.si
Website	www.leag.si

GOOD PRACTICE	Country: ITALY/SLOVENIA
Status of good practice (completed on date / in progress / planned):	In progress

6.10. Households Energy Advices (HEA) for Citizens ENSVET

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Households Energy Advisors (HEA) for Citizens "ENSVET"
Partner region:	Slovenia
Location data	Slovenia

Key action:

- Mitigation

Description:

Program for the free energy advice for citizens - Network ENSVET offers individual, free, independent energy consulting and information education and awareness activities for the promotion of energy efficiency measures and renewable energy sources for citizens in the local environment.

In offices spread across Slovenia network ENSVET, are employed qualified independent energy advisors. With free tips and interviews assist in the selection, design and implementation of investment measures of energy efficiency and use of renewable energy sources in residential buildings. Advices are increasing energy awareness of citizens, energy savings and reduction of greenhouse gas emissions and thereby are facilitating the implementation of certain measures and programs related to energy policy.

ENSVET network is based on the first and third paragraph of Article 352 EA-1, organized by the Eco Fund, together with interested local communities - municipalities. Eco Fund is also the coordinator of the network and manages the operation of the municipal advisory offices network and into the integrated energy consultants.

The project ENSVET is systematically combating pollution of the environment, energy poverty and dependency on energy imports. It also increases the quality of life and green jobs. ENSVET is giving advices to the citizens, final customers of energy in the residential sector, and is offering free and commercially independent advices with training services in the field of RES and RUE

Performance indicators / action goals:

- In 2018:
  - estimated savings of 18,1 GWh
  - 4,734 t less CO2.

Sector:

- Buildings
  - Residential buildings
- Mobility & Transport
  - Private and commercial transport
- Energy
  - Green public procurement

GOOD PRACTICE	Country: ITALY/SLOVENIA
• Local electrical production • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	Eko sklad, Slovenski okoljski javni sklad Bleiweisova cesta 30 1000 Ljubljana Slovenia
Type of Organisation	Public
Contact name	/
e-mail	ekosklad@ekosklad.si
Website	www.ekosklad.si/prebivalstvo/ensvet
Status of good practice (completed on date / in progress / planned):	In progress

7 Good practices from PP9 RRA LUR, Slovenia

7.1. Renovation of public buildings

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Renovation of public buildings
Partner region:	Italy/Slovenia
Location data	Cities of the Municipality of Ljubljana
Key action: ○ Adaptation ○ Mitigation	
Description: In 2017, the City of Ljubljana and the consortium of companies Petrol and Resalta signed concession agreements for the energy renovation of 48 buildings owned by the City of Ljubljana. In this way, they reduced energy consumption and achieved savings of 3.000 t of CO 2 emissions per year. The investment amounted to € 15 M and the annual savings to € 1 M. In 2018, they signed a contract for the second part of the project. They renovated 11 facilities and reduced CO 2 emissions for 463 t. The value is € 5 M and the guaranteed annual savings are € 300.000. Where possible, geothermal heat pumps and solar receivers were installed as part of the renovations. The third phase of the project is underway in 2020/21. They will completely renovate 17 buildings, and with partial energy rehabilitation we will increase the energy efficiency of an additional 10 buildings. The total value of the investment is € 16,1 M. In addition to the renovation of boiler rooms, the installation of highly efficient air conditioning systems, heat pumps and	

GOOD PRACTICE	Country: ITALY/SLOVENIA
roof insulation, the project will also renovate 21.500 m 2 of building envelopes and install over 9.700 new energy-saving LED lights to renovate interior lighting. The renovations will guarantee annual savings of 4.465 MWh (annual consumption of 274 households) and 968 tons less CO2 emissions.	
Performance indicators / action goals: ○ This is the largest public-private partnership project in Slovenia in the field of energy contracting, which helped establish guidelines for such projects at the national level and launched the energy contracting market in the country. The size of the project also helped to establish capacities for the implementation of such projects in companies, which at the same time obtained a reference case. In addition to financial savings, positive environmental impacts and satisfaction of end users of buildings, the added value of the project is a new educational program on the efficient use of water, energy and renewable energy sources. Namely, the City of Ljubljana has committed itself to allocating 10% of its savings to the education of children in the Ljubljana region.	
Sector: ○ Buildings • Municipal buildings equipment/facilities ○ Energy • Local heat/cold production	
Contact details to obtain further information on the practice	
Organization	MOL
Type of Organisation	Public/private
Contact name	Alenka Loose
e-mail	alenka.loose@ljubljana.si
Website	www. ljubljana.si
Status of good practice (completed on date / in progress / planned):	Ongoing

7.2. Energy renovation of the University of Ljubljana

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Energy renovation of the University of Ljubljana
Partner region:	Italy/Slovenia
Location data	Ljubljana
Key action: ○ Mitigation	

GOOD PRACTICE	Country: ITALY/SLOVENIA

Description:

UL has approached the energy renovation holistically. It has an energy strategy, concept, information system and energy management. UL carries out activities in 359 buildings with a total area of 297.179 m2, of which ~ 91% of buildings are older than 15 years, some are protected as cultural heritage. The total annual energy consumption at UL is ~ 70 GWh, which means ~ € 5,5 million in costs. On the basis of the implementing measures from the "Energy Strategy of the University of Ljubljana", in 2014 the UL developed the "Energy Concept of the University of Ljubljana". In 2015, the Central Energy Information System was established, the basis for the current collection of data on energy use. IRI UL acts as an organizer in the energy renovation of UL buildings - it unites UL experts into interdisciplinary teams (principle of knowledge alliances) and builds new knowledge and additional competencies in the field of sustainable energy and comprehensive renovation of buildings by connecting with experts from the economy. The Central Energy Information System is installed in the UL server structure, 48 UL buildings are included. Data on energy use can be entered from payment slips, and the system also allows direct entry of e-invoices.

Performance indicators / action goals:

- The Energy Information System is the result of a joint development project between IRI UL and the company Metronik, d.o.o., the architecture is such that the systems of UL members are independent. The basic EIS includes energy accounting (legal obligation), and with the upgrade it is also possible to capture data from electricity and heat meters (energy sources). The system enables the production of various reports, both by building levels and by energy, energy costs and greenhouse gas emissions, as well as the production of various comparative analyzes, which are the basis for data verification and support for energy management of UL buildings. The EIS enables the user (professional services, energy manager) to monitor energy consumption according to the data from the accounts, to make an analysis of the cost structure and to set priorities for action on the basis of financial indicators. UL thus has an overview of the state of energy use without searching for data by faculties.

Sector:

- Buildings
  - Tertiary buildings (non-municipal equipment/facilities)

Contact details to obtain further information on the practice	
Organization	Innovation and Development Institute of the University of Ljubljana
Type of Organisation	Public
Contact name	mag. Jure Vetršek
e-mail	jure.vetrsek@iri.uni-lj.si
Website	https://iri.uni-lj.si/
Status of good practice (completed on date / in progress / planned):	Ongoing

7.3. Jesenice Energy Community

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Jesenice Energy Community
Partner region:	Italy/Slovenia
Location data	Jesenice

Key action:

- Mitigation

Description:

The energy community of the CREATORS project in Jesenice is based on cooperation between local customers, public entities and the large industrial company SIJ Acroni. The pilot project in Jesenice consists mainly of the SIJ Acroni steel plant and more than a thousand households. The steel plant is one of the largest consumers of energy in Slovenia, has a large industrial battery of 12,6 MW (22,2 MWh), the plan is 5 MW roof PV, a small facility for the production of hydrogen from surplus renewable energy sources (RES) electricity in Slovenian electricity system. ACRONI intends to use approximately 25 MW of waste heat and supply it to the district heating networks of the nearby towns of Koroška Bela and Jesenice (15.000 inhabitants). The basic goal of the CREATORS project is the development of applications and service packages that will help the "creators" of future local energy communities and thus accelerate their development.

A (double) test PV with a weather station was set up, a precursor to the planned 5 MW PV. In addition to the potential for electricity production at the selected location, they also test the impact of dust particles on the operation of the solar power plant.

Performance indicators / action goals:

- The purpose of this pilot case is to (i) integrate and coordinate traditional energy sectors (electricity, heat, gas) at different levels (supply, demand, storage) by exploiting available heat and electricity storage facilities and (ii) maximizing stakeholder profits.
- The greatest potential is that the excess heat from its production process is used for reuse in the process itself in the form of hot water and steam and to feed the surplus in the district heating network for the nearby municipality of Jesenice. With the introduction of this solution for waste heat recovery, the district heating network operator estimates the potential reduction of natural gas consumption by 50-75%.
- As a major consumer of electricity, SIJ Acroni has plans to produce RES for its own consumption from solar power and potential hydropower and is also exploring possible ways to use its infrastructure to produce green hydrogen. With a large roof for PV, SIJ Acroni has the potential to promote new business models for community financing that encourage citizens to participate and create an energy community.

Sector:

- Buildings
  - Residential buildings

Contact details to obtain further information on the practice	
Organization	Jožef Stefan Institute; Center for Energy Efficiency
Type of Organisation	Public

GOOD PRACTICE	Country: ITALY/SLOVENIA
Contact name	Edvard Košnjek
e-mail	ceu@ijs.si
Website	https://www.linkedin.com/pulse/institut-jo%C5%BEef-stefan-vodi-slovenski-del-eu-projekta-creators-edvard
Status of good practice (completed on date / in progress / planned):	ongoing

7.4. Passive wooden kindergarten in Preddvor

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Passive wooden kindergarten in Preddvor
Partner region:	Italy/Slovenia
Location data	Preddvor

Key action:

- Adaptation
- Mitigation

Description:

Wooden passive nursery, whose construction and manufacture are based on the use of wood, proves the possibility of using wood and wood products for public buildings. It is made of prefabricated elements and environmentally friendly materials. It is heated with biomass, has heat recovery in the ventilation system, and has a solar power plant installed on the roof, which is optimally designed as it covers most of the roof. Together with the primary school, which is in the immediate vicinity, the facilities are energy self-sufficient.

The choice of wood as the main building material means environmentally friendly low-carbon construction, lower maintenance costs and, above all, higher living comfort. Wood does not emit harmful substances, does not cause allergies and takes care of regulating the humidity in the rooms. Key factors considered for the development of new buildings: architectural design of the house, considering the correct combination of materials and landscape orientation; the principle of sustainable effective design; ecological way of construction; checking the energy efficiency of the house; recycling - decommissioning of the house after cessation of use; eco logistics; residue management system - exploitation for energy purposes.

Performance indicators / action goals:

- The choice of wood as the main building material means environmentally friendly low-carbon construction, lower maintenance costs, and above all better living conditions or living comfort. Wood does not emit harmful substances, does not cause allergies and takes care of regulating the humidity in the rooms.
- Jelovica hiše d.o.o. is the first Slovenian company with energy self-sufficiency from renewable sources sun - water - biomass. With the installation of a new solar power plant on the roof of the factory in Preddvor, they gained sustainable production of wooden prefabricated houses and buildings. Today, they obtain more electricity and heat from natural renewable sources than they use in the production process. In addition to the energy they obtain from the new solar power plant,

GOOD PRACTICE	Country: ITALY/SLOVENIA
part of the energy is also obtained from their own hydroelectric power plant and from wood residues.	
Sector: ○ Buildings • Municipal buildings equipment/facilities	
Contact details to obtain further information on the practice	
Organization	Jelovica hiše d.o.o.
Type of Organisation	Private
Contact name	Jana Košir
e-mail	info@jelovica.si
Website	www.jelovica.si
Status of good practice (completed on date / in progress / planned):	Finished in 2013

7.5. Cultural society ProstoRož

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Cultural society ProstoRož
Partner region:	Italy/Slovenia
Location data	Ljubljana
Key action: ○ Adaptation ○ Mitigation	
Description: As they say for themselves: they are a non-profit urban studio. It brings together architects, urban planners, sociologists, lawyers and technical assistants who, with their knowledge, enable an interdisciplinary approach to the challenges of urban space. They connect people with public space and people with each other through space. Since year 2004 they continue to explore space and its importance to local people and society. They draw attention to overlooked public spaces and arrange them to suit residents and visitors. Through their practice, they want to address the environmental and social challenges facing small and large cities. That is why roads are being turned into squares, construction pits and forgotten green areas are being revived. They believe that public spaces must be accessible to all social groups, and they strive to understand the ways in which they use them. They actively want to contribute to the co-creation of quality public spaces that offer support to individuals who work in them. Such spaces are flexible and democratic, allowing for change and spontaneous use.	

GOOD PRACTICE	Country: ITALY/SLOVENIA
Among the most notable projects are the inventory of hotspots in Ljubljana, the arrangement of a green roof at the primary school in Kranj and the regulation of traffic / parking in Idrija. They conducted a series of lectures and published numerous articles.	
Performance indicators / action goals: ○ In sixteen years of operation, they have carried out more than 100 projects. With each, they learn and expand their scope of action, both in scale and in the methods they use. From the very beginning, they have been interested in short-term and temporary projects that are just testing the right and constructive approaches to solving problems in the urban environment. They complement and integrate these into long-term revitalizations of individual neighborhoods, in which they cooperate with residents and organizations at the local level. Their work connects the search for new, different possibilities for arranging space. To ensure the participation of more individuals at the community level, they use a bottom-up approach in their work. Therefore, it is important that they raise awareness of the importance of public space and build vital local communities that will be able to actively participate in shaping their environment. Which is probably the only right way to realize you. green transition.	
Sector: ○ Buildings ○ Mobility & Transport ○ Land use planning ○ Environment & Biodiversity	
Contact details to obtain further information on the practice	
Organization	O Cultural society prostoRož
Type of Organisation	Private
Contact name	Alenka Korenjak
e-mail	prostoroz@gmail.com
Website	https://www.prostoroz.org/
Status of good practice (completed on date / in progress / planned):	ongoing

7.6. Sun Contract platform, energy market

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Sun Contract platform, energy market
Partner region:	Italy/Slovenia
Location data	Ljubljana
Key action: ○ Adaptation	

GOOD PRACTICE	Country: ITALY/SLOVENIA
○ Mitigation	
Description: SunContract is the first operational P2P platform based on blockchain technology, and at the same time a leading global decentralized infrastructure that promotes the use of energy from renewable sources and the energy self-sufficiency of individuals and communities. As it enables the possibility of direct agreement on the price of electricity between producers and consumers, it enables savings in electricity costs, as there is no longer an intermediary between buyers and sellers. The SunContract energy market is the fruit of the Slovenian knowledge of the company Sonce energija. The energy market came to life in April 2018. The solution was reached using technology allowed by existing legislation, and blockchain technology increases the level of trust among users. As not all electricity users are familiar with digital currency trading, SunContract has recently made it possible to pay obligations on the platform in euros. With this, they wanted to bring and simplify the use of the market to as many users as possible. They also added the option to settle liabilities through direct debit.	
Performance indicators / action goals: ○ The SunContract energy market is dedicated to more efficient electricity trading and renewable energy electricity trading. The point is to trade electricity freely, accessible to all. ○ Trading was made cheaper, automated and direct contact was made between electricity producers and end customers. ○ In this way, they contribute to greater democracy in energy production and promote energy communities with a bottom-up principle, as a key approach to achieving the green transition.	
Sector: ○ Energy • Local electrical production	
Contact details to obtain further information on the practice	
Organization	Sonce energija
Type of Organisation	Private
Contact name	Gregor Novak
e-mail	info@sonce.com
Website	https://sonce.com/
Status of good practice (completed on date / in progress / planned):	ongoing

7.7. Secured bike storage for e-bikes

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Secured bike storage for e-bikes
Partner region:	Italy/Slovenia

GOOD PRACTICE	Country: ITALY/SLOVENIA
Location data	Grosuplje

Key action:

- Mitigation

Description:

Protected bike storage for electric bikes with a solar power plant and a management system called MUSE mojEkolo, which allows easy use via the application of the same name. The bicycle storage is the result of successful cooperation between the Municipality of Grosuplje and the Regional Development Agency of the Ljubljana Urban Region within the European MUSE project and is a novelty, it is a pilot project. The secure e-bike storage is entirely the work of Slovenian knowledge. The construction, including solar panels, was made by the company KIG dd, and the management system MUSE mojEkolo for the use of the bicycle storage was made by Vizija Sport d.o.o.

The bike storage allows storing and charging up to 8 electric bikes. Each parking space has its own entrance and its own socket for direct charging. The door of the bike storage has a built-in electric lock. Access is possible with the mobile application for managing e-bike garages or with a user card. The service - both storage and charging is free, with a limit of up to 12 hours.

Performance indicators / action goals:

- The aim of the project is to encourage people to use e-bikes, also in combination with public transport (the bike storage is located next to the train station), as a form of sustainable mobility and enable them to safely store and recharge their bikes with renewable energy.
- The aim is also to test and make an analysis / study, which will examine the user experience based on the results of measurements and focus on guidelines for setting up such bike storage (optimal location, power of panels according to the desired number of electric bikes, possible revision of technical specifications and design) in the municipality and region. By setting up the bicycle storage as a pilot project and the possibility of expanding their network, it contributes to reducing traffic congestion, reducing environmental pollution and noise, and promoting sustainable mobility and the promotion / production of energy from renewable sources.

Sector:

- Mobility & Transport
  - Private and commercial transport
  - Public transport

Contact details to obtain further information on the practice	
Organization	RRA LUR
Type of Organisation	Public
Contact name	Matej Gojčič, Deputy Director
e-mail	info@rralur.si
Website	www.rralur.si
Status of good practice (completed on date / in progress / planned):	ongoing

7.8. Production of eCult e-bikes

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	Production of eCult e-bikes
Partner region:	Italy/Slovenia
Location data	Logatec

Key action:

- Mitigation

Description:

eCult is a new brand of electric bicycles, which is the result of cooperation between Cult and Domel. Cult has developed a bicycle frame, while Domel has developed an electric drive, which is one of the world's top suppliers of electric drive motors for e-bikes. The engine is fully developed in Slovenia; innovative BLDC engine with high efficiency, innovative construction and technology that allows long life, quiet operation and high efficiency of up to 87 percent. The innovation, which received very favorable responses in professional journals, is the result of cooperation between Domel and Podkrižnik and partners Emsiso, the LECAD department at the Faculty of Mechanical Engineering in Ljubljana and the German BMZ. The engine is extremely energy efficient in terms of power. It is powered by a battery, which is also the fruit of Slovenian knowledge - the Maribor company Comtron d.o.o Its capacity, integrated into the lower tube of the frame, is 660 watt hours, which is ten percent more than the known competition. It is almost entirely a Slovenian product: the engine is powered by a battery developed and assembled in Slovenia, the bike frame was designed in Slovenia, and the bike will also be assembled in Slovenia.

Performance indicators / action goals:

- It is a domestic product, thus eliminating a large part of transport and related emissions. The bike is suitable for wide use and is also suitable for varied and steeper Slovenian ends. To a certain extent, it can also replace the predominant use of passenger cars and contribute to lower emissions, as it allows considerable autonomy and transport even over long distances (compared to a bicycle).

Sector:

- Mobility & Transport
  - Private and commercial transport

Contact details to obtain further information on the practice	
Organization	CULT d.o.o.
Type of Organisation	Private
Contact name	Uroš Gnezda
e-mail	uros.gnezda@cult.si
Website	www.cult.si
Status of good practice (completed on date / in progress / planned):	ongoing

7.9. The first self-sufficient / local energy community Luče, Slovenia

GOOD PRACTICE	Country: ITALY/SLOVENIA
Title of the good practice:	The first self-sufficient / local energy community Luče
Partner region:	Italy/Slovenia
Location data	Luče

Key action:

- Adaptation
- Mitigation

Description:

The municipality of Luče has been in the Green Scheme of Slovenian Tourism since 2018 and the town of Luče since 2019 in connection with Gorniške vas. In this way, Luče demonstrates its commitment to sustainable development. In the local company Biomasa, one of the initiators of the project, they are pioneers in the use of renewable energy sources in our country and an example of good practice in sustainable development.

The purpose of the project is to improve self-sufficiency and, above all, security of supply in the energy system, which already has a relatively high share of RES production. As part of the pilot project, additional solar power plants (110 kW), in-house electricity storage (65 kWh), a system electricity storage and an EV charging station were connected to the distribution network. They installed and connected 9 solar power plants on residential houses, house batteries and a larger system battery.

The introduction of a pilot self-sufficient energy community also poses a challenge in integrating into the existing network and adapting legislation to new forms of active users, so-called prosumers who are no longer just electricity consumers, as well as energy storage solutions and other technological innovations.

Performance indicators / action goals:

- The main goal of the project is to establish local energy systems that, with the help of new energy communities, will enable further integration of renewable energy sources in limited networks and accelerate the transition of a centrally set energy network with passive customers into a flexible and active network.
- Self-sufficient energy communities based on renewable energy sources are one of the important strategies that have positive environmental and social effects and with which we can increase self-sufficiency, reliability and security of electricity supply.
- In addition to technical solutions that enable the creation of energy islands, the social - community - side of self-sufficient communities also plays an important role. How it is organized, what are the good practices of integration measures and how it can have a positive impact on the wider local community are just some of the issues that will encourage the introduction of such communities in the future.
- One of the performance indicators is also the demonstrated possible independence from the external electricity network.

Sector:

- Energy
  - Local electrical production

GOOD PRACTICE	Country: ITALY/SLOVENIA
Contact details to obtain further information on the practice	
Organization	Municipality of Luče
Type of Organisation	Public
Contact name	Ciril Rosc, Mayor
e-mail	obcina@luce.si
Website	https://www.luce.si/ , http://iri.uni-lj.si/luce-orjejo-ledino-prva-energetska-skupnost-v-sloveniji/
Status of good practice (completed on date / in progress / planned):	Ongoing