BEACON Bridging European & Local Climate Action

CONNECTING AND COLLABORATING FOR CLIMATE: THE BEACON PROJECT

On behalf of:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany

European
Climate Initiative
EUKI

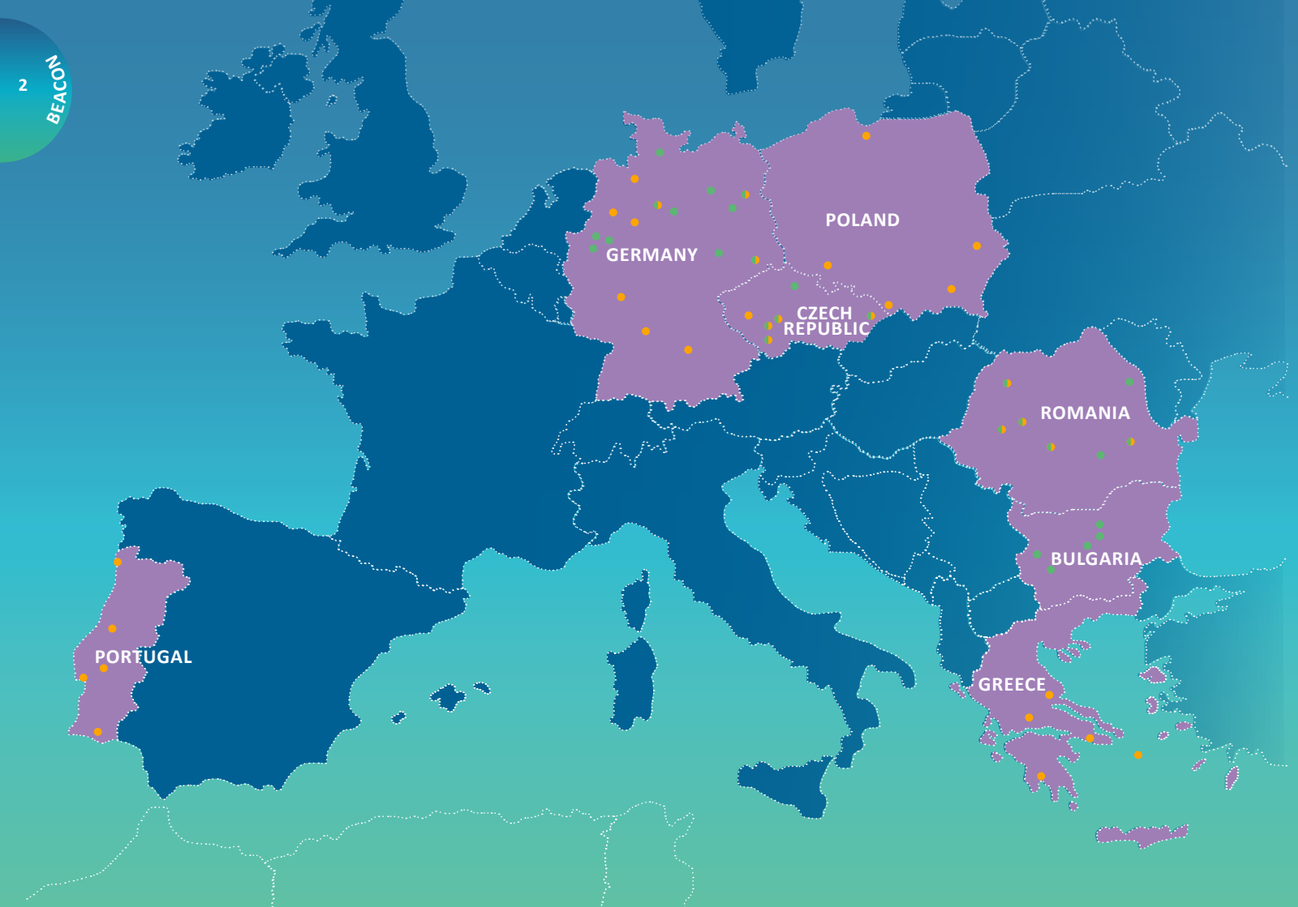


TABLE OF CONTENTS

At the UN Climate Change Conference in 2015, then French President François Hollande, French Foreign Affairs Minister Laurent Fabius and UN Secretary-General Ban Ki-Moon applaud the conclusion of negotiations on the Paris Agreement.

The realisation of the **global and EU-wide commitments** depends, to a large extent, on **national governments** creating and implementing effective policies and framework conditions.

An increasingly large role will be played by **municipalities and local governments**. These stakeholders can be pioneers and drivers of profound decarbonisation and social transformation processes as their actions have considerable potential for increasing energy efficiency and reducing greenhouse gas emissions.

Schools and other educational institutions can play a key role by reducing their energy consumption and educating future generations for a climate friendly world.

To successfully implement the Paris Agreement and European climate and energy targets for 2030 and beyond, climate action needs to be enhanced on all levels of governance.

Good examples of successful climate protection measures that tackle obstacles to climate action ambitions already exist across Europe on both national and local levels. There are communities and actors leading the way to becoming carbon neutral and more climate friendly. In addition to environmental and climate protection reasons, these stakeholders have recognised other **benefits of climate action** such as increasing the well-being of the population, promoting innovation, and stimulating the local economy.

Local initiatives such a renewable energy projects and the development of climate action plans can be facilitated with targeted, **needs-based support** and can have a lasting impact through the exchange and capacity building of multipliers and by connecting with relevant national stakeholders.

BRIDGING EUROPEAN AND LOCAL CLIMATE ACTION (BEACON)

The Bridging European and Local Climate Action (BEACON) project promotes climate action and facilitates exchange between and among national governments, municipalities, and schools in Europe.

The aim of the project is to **strengthen bilateral and multilateral cooperation** and create common ambition to realise the Paris Agreement. Through joint learning, networking, and tailored advisory services, policymakers, municipal actors, and educators gain technical and process-related skills that help them develop, refine, and **implement measures for reducing greenhouse gas emissions.**

Good practices in local climate action will be identified and shared in a network of 34 municipalities from the Czech Republic, Romania, Greece, Poland, Portugal, and Germany. At home, each municipality receives needs-based technical support and on-the-job coaching that can be applied and implemented in everyday work. Workshops at the regional level bring participating municipalities together to exchange information on topics of joint interest. The work with municipalities also includes the support of five municipal climate partnerships.

© Navigant / Kristen Brand

"In highlighting successful climate action measures and the associated benefits, we create understanding, acceptance, and support for climate protection."

Moritz Schäfer,
BEACON Project Manager (Navigant)

www.euki.de/euki-projects/beacon

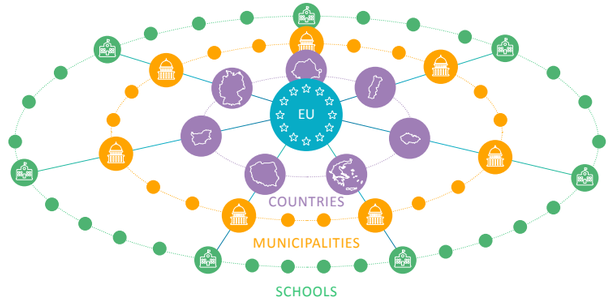
BEACON

Bridging European & Local Climate Action

To increase awareness about climate change and action on the individual level, 57 schools in Bulgaria, the Czech Republic, Romania, and Germany are involved in the project. From developing incentive models for energy savings with government and school officials to measuring temperature and CO_2 concentrations with teachers and pupils, a wide range of activities targeting a variety of stakeholders take place in schools. The project team and participants also analyse climate action in school curricula and existing educational programs, create energy savings action plans in schools, and conduct workshops and trainings. Study tours also facilitate exchange between teachers and administrators in Germany and the partner countries.

At the national level, emissions reductions and corresponding good practices in national climate protection policies and instruments from across the EU are analysed in detail and shared with relevant national stakeholders. The focus of this work includes the buildings, transport, small industry, and agriculture sectors. Workshops with national, regional, and local actors will be organised in selected partner countries to work jointly on specific challenges.

By bringing diverse actors together, BEACON contributes to European integration, reducing greenhouse gas emissions, building capacity for local climate action, and raising awareness for climate action.



The BEACON project is financed by the European Climate Initiative (EUKI). EUKI is a financing instrument by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). Led by Navigant, the project team is a consortium of 11 organisations from across Europe. The work in municipalities and schools is led by adelphi and the Independent Institute for Environmental Issues (UfU), respectively, and supported by partner organisations in each of the target countries.

Duration: April 2018-March 2021
Countries: Bulgaria, Germany, Greece, Poland, Portugal, Romania, Czech Republic

ACCELERATING CLIMATE ACTION, STRENGTHENING EUROPE: THE EUROPEAN CLIMATE INITIATIVE (EUKI)

Close cross-border cooperation is a key success factor in the realisation of the Paris Agreement in Europe.
In 2017, the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) launched the European Climate Initiative (EUKI) to finance projects aimed at promoting closer European cooperation in climate action.

The initiative is working towards several goals:

- Creating awareness and pooling knowledge
- Establishing networks and exchanging succesful models
- Developing capacity and building a bridge for EU funding

EUKI finances a variety of innovative, cross-border projects all over Europe to help achieve the objectives of the Paris Agreement.
For example, EUKI actors support governments in creating long-term climate strategies, disseminating approaches for the agricultural use of rewetted peatlands, and advocating an end to coal heating in private households. In total, the EUKI finances projects in eight core areas.

Stefan Bundscherer, Head of the EUKI financing instrument, at the annual EUKI networking conference

© GIZ / André Wagenzik

On behalf of:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

European **Climate Initiative** EUKI

of the Federal Republic of Germany

"The Federal Government launched a European Climate Initiative because we do not just want to take steps here at home but also want to look at how our neighbours and other Member States of the European Union are getting on with achieving their targets."

German Chancellor Angela Merkel

Non-governmental organisations, municipalities, and other public authorities; non-profit enterprises; and scientific and educational institutions based in the EU are eligible for funding. Organisations can participate in the EUKI tender procedures or in the annual EU-wide call for project ideas.

Since 2017, EUKI has promoted more than 60 projects in 24 EU countries. Over 140 organisations are involved in EUKI projects, forming a strong network for climate action in Europe. Within its EUKI Academy, the initiative offers trainings on challenges and opportunities of climate action as well as on methodological skills.

BEACON is financed through EUKI and a committed partner in the EUKI community.

www.euki.de

School children plant trees and vegetables whilst learning about the effects of eating habits on climate change

© Manfred-Hermsen-Stiftung

EUKI fosters the exchange of climate-friendly land use practices and brings together scientists and practitioners

© Jan Peters

CONNECTING AND COLLABORATING ON NATIONAL CLIMATE POLICIES

Policy instruments that are already successful in one country can potentially be transferred to other countries.

Workshop in Berlin, 10 October 2018

Whether social, economic, or environmental, successful national climate policy or instrument design face many constraints within the national context. In many cases, however, it would be effective for countries to **learn from one another and exchange on experiences.** By doing so, policy instruments that are already successful in one country could be transferred to others and facilitate additional emissions reductions.

Exchange at transnational and European levels is a critical part of BEACON and contributes to the overarching aim of facilitating European integration via bilateral and multilateral dialogue. Our work in this area involved policies and instruments outside the EU Emissions Trading System (ETS) in the **transport, buildings, small industry, and agriculture sectors** as they are responsible for 60% of EU-wide emissions and decarbonising these sectors is challenging. These sectors fall under the EU's Effort Sharing Regulation (ESD) and are subject to binding national targets to reduce greenhouse gas emissions.

The key question guiding our analysis was: *What are the sector-specific policy instruments from European countries that Germany and other EU Member States can learn from and use to improve their climate policy, particularly in Effort Sharing Decision sectors?*

The initial study included an analysis of **greenhouse gas emissions reductions and ESD target achievement** in all EU Member States and sector-specific developments. Based on this research, country-sector combinations were selected where substantial emissions reductions were achieved between 2005 and 2015.

The results of this analysis were captured in a policy paper. Based on this research, specific policy instruments were selected for in-depth analysis.

Eighteen individual climate-related policies and instruments as well as **three climate change laws** from eight European countries were outlined in detailed factsheets authored by Navigant and adelphi. Rather than pick winners, the policy instruments were evaluated using a common framework with a focus on effectiveness and transferability.

From the bonus-malus vehicle incentive system in France to the Green in Savings Program in the Czech Republic, the factsheets cover a range of countries and sectors from which policymakers can learn. The climate protection laws of the UK, France, and Sweden were also analysed.

From the analysis and subsequent **workshops with national stakeholders**, it is clear that the exchange of successful policy instruments in other European countries can make a considerable contribution and provide concrete impetus for national energy and climate action plans. While achieving emissions reductions in the transport, buildings, small industrial installations, and agriculture sectors is difficult, countries across Europe are using a range of policy tools to make progress against their greenhouse gas emissions reduction targets.

Industry

Tax reduction for energy savings: Through the corporate energy tax deduction, companies in Belgium can apply their investment in energy efficiency measures to the profit tax. In place since 2015, the one-time tax deduction amounts to 13.5% and gives industrial companies incentives to invest in energy efficiency measures.

Energy Efficiency Obligation: To achieve Art. 7 target of the EU Energy Efficiency Directive, Denmark has used energy efficiency commitments with companies. Targets for energy efficiency improvements are set for and distributed among electricity, gas, oil, and district heating companies. The companies then carry out energy efficiency measures at the end customer or through a third party. The savings achieved are credited against the target.

Climate Change Agreements: The Climate Change Agreements (CCA) and the Climate Change Levy (CCL) are important levers to reach UK climate targets through industrial energy efficiency and clean energy. The CCL is an energy tax on the commercial consumption of electricity from fossil fuels. In sector- or company-specific agreements, companies from energy-intensive sectors voluntarily commit themselves to energy efficiency or CO_2 reduction targets and receive tax credits on the CCL in return.

CO_2 Tax: Introduced in 1991, the Swedish carbon tax is the country's central climate policy instrument and the world's strongest CO_2 price signal. The tax covers energy emissions not covered by the EU ETS in the industrial, building (heat), and transport sectors and has been a highly effective instrument in reducing emissions.

Transport

Incentives for e-mobility: Thanks to a range of policy measures and incentives, Norway has the world's highest market penetration of electric vehicles. These include the exemption from a 25% VAT on the purchase or lease of electric vehicles as well as the exemption from registration taxes. Other incentives include lower company car and vehicle taxes, exemption from urban parking fees and tolls, and the free use of ferries.

Company car taxation: To reduce fuel consumption and emissions, the Swedish government has implemented various incentives to promote the registration of low-emission company cars, which make up a large percentage of cars on Swedish roads. For example, the taxable benefit of hybrid or electric cars is 60% or 80%, respectively, lower compared to more emissions-intensive vehicles.

Bonus-malus scheme: Since 2008, the bonus-malus system in France has provided direct financial incentives for vehicle buyers to opt for less CO_2-intensive vehicles. Buyers of electric and hybrid cars receive a bonus, while buyers of new cars with high CO_2 emissions are required to pay a penalty.

Modal shift: Switzerland has a comprehensive package of measures to shift freight traffic from roadways to railways, including an expansion and modernisation of the railways, a ban on night driving for lorries, and a charge on heavy goods vehicles. Support from Germany and Italy in constructed transshipment terminals has also helped reduce the number of trucks on Swiss roadways.

Agriculture

Action Plan Aquatic Environment: Three Action Plans for the Aquatic Environment (APAEs) were implemented in Denmark in the period between 1990 and 2010. They contained a range of measures and have successfully introduced regulation to improve the use of manure and implement more stringent regulations on the use of nitrogen-based fertiliser, thereby reducing CO_2 emissions.

Biomethane support: The French Energy Methanisation Autonomy Azote (EMAA) plan provides a legal framework for agricultural methanation in France, in addition to a number of supportive measures that produce biogas and biomethane waste. The plan facilitates investment grants for research and technical equipment as well as minimum prices for bioenergy products.

GHG Action Plan: In 2011, the UK agricultural sector adopted the Greenhouse Gas Action Plan for Agriculture (GHGAP). It provides farmers with advice, training, and information and leads to measures that promote better efficiency and modern farming practices, thereby reducing emissions.

Agrocovenant: The Agrocovenant is a voluntary public-private agreement between the government of the Netherlands and a variety of agricultural sector organisations on various targets as well as measures and instruments for reducing emissions and increasing energy efficiency. If the sector's greenhouse gas reduction targets are not achieved, regulatory measures are taken.

Buildings

Latvian Baltic Energy Efficiency Facility (LABEEF): LABEEF is a company that supports energy service companies (ESCOs) in the long-term financing of renovations of multifamily buildings through energy performance contracting. The contract between the ESCOs and the building owners is forfeited by a third party. Thus, the execution risk stays with the ESCO while the financing risk is transferred to LABEEF. LABEEF enables large financial institutions to audit this financial product (due diligence).

Energy transition tax benefit: The energy transition tax credit in France allows 30% of housing expenditure for energy-efficient refurbishment to be deducted from income tax. The maximum tax deduction is up to €8,000 for an individual and €16,000 for a multi-person household within 5 years. The tax creates incentives for building owners to implement energy efficiency measures in their homes.

Innovation cluster: In Sweden's building sector, networks of industry/market actors and the state promote innovative energy-savings solutions through technology-oriented demand bundling (innovation clusters) in order to bring them to the market faster. The clusters use demonstration projects to showcase actual savings.

Energy Performance Certificate Database: In 1997, Denmark was one of the first European countries to introduce a central building energy performance certificate database. It now includes the entire energy performance certificates of about one-third of all Danish dwellings on a publicly available website. It allows relevant stakeholders to access and use a wealth of information to raise awareness of energy savings and improve decision-making.

New Green in Savings: The Green in Savings programmes consist of a financial scheme to support renovation, efficient heating systems, and nearly zero energy buildings, which have significantly contributed to the Czech climate achievements in the residential buildings sector. The programme obtains most of its financial resources through EU ETS auction revenues.

Slovak Sustainable Energy Financing Facility (SlovSEFF) Programme: The EBRD launched this programme in 2007 to encourage sustainable energy investments in companies and housing associations by providing loans and incentive payments in the case of successful completion and verification of a project. Integral to the project design is a supplemental grant funding for technical assistance.

To download the studies visit: **www.euki.de/en/news/successful-climate-protection-policies-in-europe/**

CONNECTING AND COLLABORATING AMONG MUNICIPALITIES

To exchange information and best practices and build capacity on the local level, 25 municipalities from the Czech Republic, Poland, Romania, Greece, and Portugal, as well as nine German municipalities have been selected to participate in the project. Each municipality in the target countries receives hands-on, needs-based technical support and on-the-job coaching on a wide range of climate action topics. In addition, at the transnational and regional levels, workshops and city partnerships bring participating municipalities together to exchange best practices and experiences.

The various dialogue and consulting formats provide the municipalities with specialist knowledge and know-how:

- In **transnational workshops**, good practices of municipal climate protection are discussed. Through an open dialogue about obstacles and opportunities, new impulses for the implementation of climate protection measures on the ground are created.
- The **individual consultation services** provided to each of the 25 European municipalities consist of hands-on, needs-based technical support and on-the-job coaching on a wide range of climate action topics and enable a deepening and operationalisation of this knowledge.
- Valuable experiences, proven strategies, and examples from Germany are made available through the **translation and country-specific adaptation of existing guidelines.**


© adelphi / Lisa Strauch

Partnership Workshop in Agios Dimitrios, November 2019

"I believe that the partnership meetings with Bottrop generate new impetus to the climate change initiatives for both of our cities."

Maria Androutsou, Mayor of Agios Dimitrios, Greece

- Participants in the **five municipal climate partnerships** have the opportunity to exchange expertise and develop joint projects with expert support through one-to-one advice.
- **Two municipal conferences** are held to present initial project results and serve as a source of inspiration and a platform for trans-European networking in a collegial atmosphere.

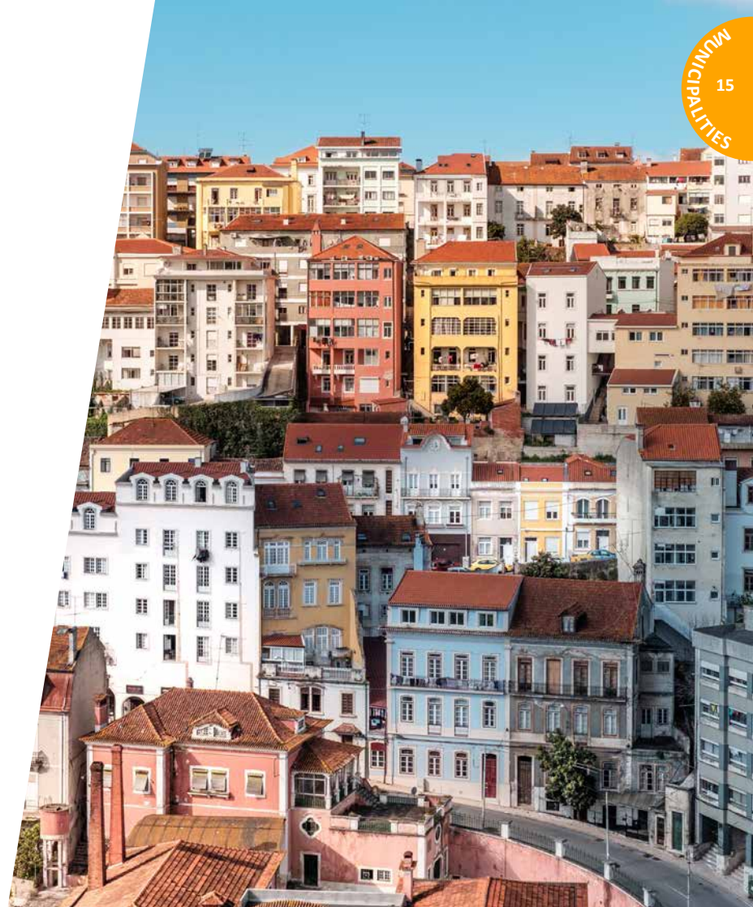
34 MUNICIPALITIES

The following pages present each of the participating municipalities and include information about their climate action priorities, the related topics they can share experience in, and the topics that they would like to learn about.
The icons below and in each of the municipality portraits correspond to these elements.

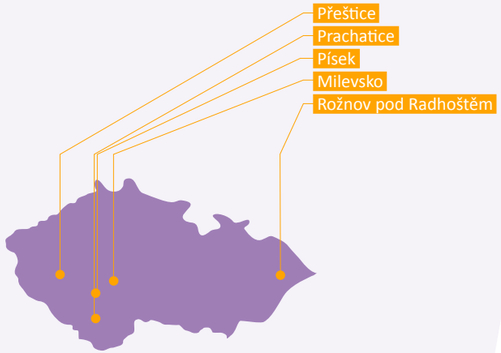
Priorities

We can share experience in…

We would like to learn about…



CZECH REPUBLIC




Townhall of Milevsko

MILEVSKO

CZECH REPUBLIC

Contact: Vít Král, kral@zivemilevsko.cz
Population: 8,500

Sustainable mobility • Raising public awareness for climate action • Becoming a smart city • Implementing a Sustainable Urban Mobility Plan (SUMP) • Water management

Waste, water, and soil management • Carbon-negative technologies and nutrient recovery • City e-bike programme

Motivating citizens to become engaged in climate action • Modernising and increasing the efficiency of the street lighting system • Introducing an energy management system to provide an overview of energy consumption and costs • Developing a waste management system

PÍSEK

CZECH REPUBLIC

Contact: Edita Kučerová, edita.kucerova@mupisek.cz
Population: 30,119

Sustainable mobility and development • Monitoring energy consumption and air quality • Reducing the energy intensity of public buildings • Renovating energy infrastructure, e.g., heat distribution network • Transitioning from fossil fuels to biofuels in the energy mix

Energy performance contracting • Developing an energy web portal (http://portal-pisek.enesa.cz) and a transportation web portal (http://parkovani.pisek.eu) • Developing and implementing a municipal thermal energy policy

Developing a general energy concept • Increasing the energy literacy of residents • Sustainable mobility • Improving the indoor climate of municipal buildings • Raising awareness for and improving understanding of renewable energy sources among the general public


Aerial view of Písek


A view of the hills around Prachatice

PRACHATICE

CZECH REPUBLIC

Contact: Marie Peřinková, mperinkova@mupt.cz
Population: 10,852

Saving energy • Managing waste efficiently and sustainably • Improving air quality • Ecological education in schools • Sustainable transportation • Creating a city energy strategy • Developing a waste management strategy for residential neighbourhoods

Waste management • Raising public awareness of climate action and waste management

Engaging citizens in energy-saving measures • Decreasing waste production and using waste to produce energy • Encouraging cycling and pedestrian transport in the city • Obtaining an overview of energy consumption and costs

PŘEŠTICE

CZECH REPUBLIC

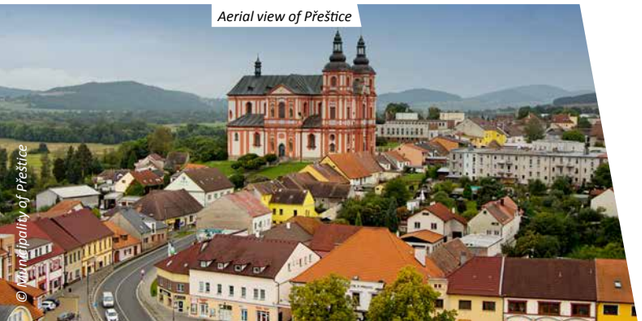
Contact: Marek Krivda, krivda@prestice-mesto.cz

Population: 7,114

Reducing energy consumption in municipal buildings • Increasing the share of renewables in the municipal heat supply • Sustainable mobility • Environmental education

Modernising the municipal district heating system and reducing natural gas consumption by maximising the efficiency of residual heat produced by biogas cogeneration units

Effectively communicating municipal climate action projects to citizens • Using sorted waste in municipal district heating • Saving energy and improving the air quality in schools



Aerial view of Přeštice

Roznov pod Radhostem, in the heart of Beskydy mountain range

ROŽNOV POD RADHOŠTĚM

CZECH REPUBLIC

Contact: Jan Cieslar, jan.cieslar@roznov.cz

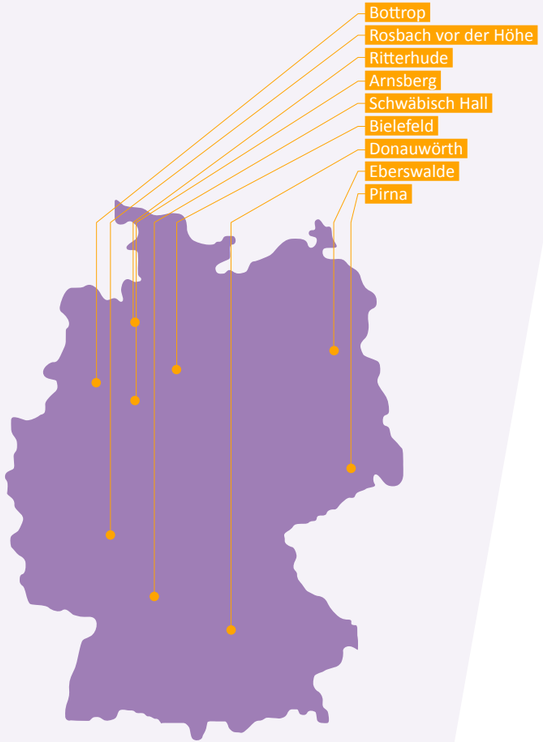
Population: 16,469

Sustainable mobility • Rainwater retention and water management • Monitoring energy consumption and air quality • Increasing energy efficiency in buildings and of the heat supply

Renovating buildings • Increasing the efficiency of the public lighting system • Energy management systems • Implementing eco-school programmes • Building bike paths and promoting sustainable tourism

Sustainable public transport • Implementing energy-saving projects • Increasing share of renewables in the city's energy mix • Using waste for energy production • Developing and implementing a plan for sustainable mobility • Further modernisation of street lighting

GERMANY



Old town with view of the church bell tower

ARNSBERG

GERMANY

Contact: Sebastian Marcel Witte, s.witte@arnsberg.de

Population: 75,000

Achieving climate neutrality by 2050 • Integrating climate change mitigation and adaptation • Increasing the share of renewables in the energy mix

Education for sustainable development • Sustainable urban development • Improving energy efficiency in private households • Adapting to climate change, especially regarding forests, river landscapes, and tributaries • Implementing a sustainability strategy • Organising a sustainability festival

Sustainable mobility • Holistic approaches to achieving CO_2 neutrality • Smart and resilient cities • Eco-friendly mobility

BIELEFELD

GERMANY

Contact: Olaf Lewald, olaf.lewald@bielefeld.de

Population: 340,000

Change of mobility behaviour: reducing private motorised traffic to 25% and increasing sustainable mobility (e.g., cycling, public transport) to 75% of modal split by 2030 • Zero Emission Zone in city centre • Effectively engaging stake-holders on climate action

Integrating action planning and networking at the local and transnational levels • Redesigning central traffic routes to reduce emissions from cars • Developing air quality plans • Building bicycle-friendly infrastructure

Climate policy and a future-oriented investment policy • Stakeholder engagement approaches • E-mobility and auto-nomous driving • Increasing citizen engagement on climate action • Using urban space intelligently and sustainably

Bielefeld – The Green City

© Bielefeld Marketing

Historic town hall of Bottrop

© Stadt Bottrop

BOTTROP

GERMANY

Contact: Tilman Christian, tilman.christian@bottrop.de

Population: 116,800

Climate-friendly urban redevelopment • Increasing the share of renewables in the energy mix

Smart air quality control • Cross-financing projects with a range of stakeholders • Energy monitoring systems • Green procurement

Implementing Sustainable Development Goals (SDGs) and linking measures to climate action goals • Implementing green urban infrastructure and augmenting existing green spaces • Energy efficiency in new building construction and renovation • Addressing structural and social changes along with climate action • Developing a mobility concept

DONAUWÖRTH

GERMANY

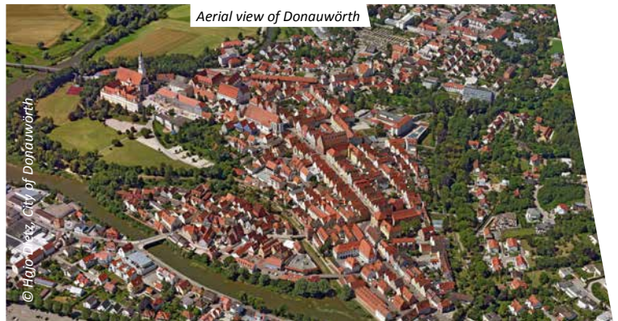
Contact: Andreas Reiner, andreas.reiner@donauwoerth.de

Population: 20,400

Implementing renewable energy and energy efficiency projects • Sustainable urban mobility via electric vehicles, public transport, and cycling lanes

Addressing barriers to implementation of climate action measures • Rapidly implementing and demonstrating success in climate protection measures

Improving communication with citizens on climate action • Creatively communicating the benefits and need for climate action with innovative channels beyond traditional newspaper and radio outlets • Strategies for gaining cross-department support • Reducing car traffic • Introducing cycling lanes in hilly terrain • Connecting with local businesses and industries • Creating local e-mobility infrastructure



Aerial view of Donauwörth

© Hallo Foto, City of Donauwörth

City centre of Eberswalde – Sustainable city development between forests and water

© Sören Tetzlaff, City of Eberswalde

EBERSWALDE

GERMANY

Contact: Severine Wolff, s.wolff@eberswalde.de

Population: 41,380

Managing the transition towards a sustainable mobility system in the city • 2020 climate action plan

Incorporating energy efficiency into various aspects of the public administration (e.g., management, procurement) • Increasing sustainability and energy efficiency in public and private buildings, planning, and residential areas • Creating climate-resilient urban structures • Implementing sustainable mobility measures regarding e-mobility, cycling, and public transport

Motivating citizens to engage on climate action • Promoting the city's own climate action activities • Undertaking energetic refurbishment in historic buildings

PIRNA

GERMANY

Contact: Thomas Freitag, thomas.freitag@pirna.de
Population: 39,250

Transforming the district heating system to be CO_2 neutral • Climate-friendly mobility • Communicating climate action with citizens • Collaborating with local companies to implement climate action measures

Municipal energy management • Sustainable mobility (i.e., charging stations, public transport, cycling)

Cooperating with schools to save energy • Green heat production • E-mobility in public transport and public car-pooling • Raising awareness about climate change among community members • Setting and implementing energy efficiency standards in existing building stock and new building plans • Obtaining funding for climate action measures

View of the marketplace and the church of St. Mary

© Jens Domke, City of Pirna

Historic town hall

© Marcus Lorenzcat, Municipality of Ritterhude

RITTERHUDE

GERMANY

Contact: Ulrich Müller, um@local-ritterhude.de
Population: 14,598

Setting up an energy-related district revitalisation concept • Raising awareness among homeowners to invest in energy refurbishment measures

Renewables and public buildings (solar panels and combined heat and power plant) • Citizen participation in investments for PV plants on public buildings

Effective communication and citizen mobilisation strategies

ROSBACH VOR DER HÖHE

GERMANY

Contact: Monika Jost, jost@rosbach-hessen.de
Population: 13,300

Becoming a Master Plan city for climate protection • Raising awareness among citizens for climate action • Developing and communicating recommendations for sustainable living

Implementing mobility action days together with a partner city • Energy management for municipal buildings • Modernising street lighting • Citizen solar energy systems on municipal buildings • Bike and ride systems at railway stations • Upgrading to a more sustainable municipal vehicle fleet • Sustainable land-use planning and housing construction

Securing funding for projects • Motivating citizens to take climate action • Effective climate mitigation measures • Integrating climate mitigation into the curricula of local schools

2018 Mobility Action Day in Rosbach vor der Höhe

© City of Rosbach vor der Höhe

View from Grasbödele to the old town of Schwäbisch Hallbisch Hall

© Nico Kurth, City of Schwäbisch Hall

SCHWÄBISCH HALL

GERMANY

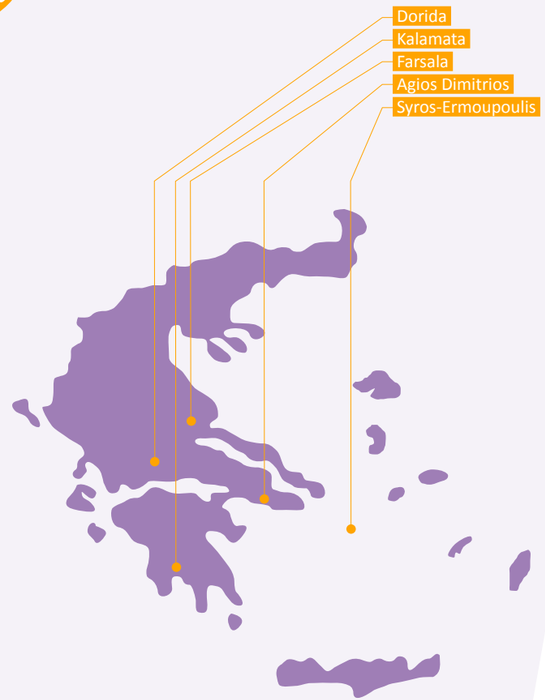
Contact: Heiner Schwarz-Leuser, heiner.schwarz-leuser@schwaebischhall.de
Population: 40,600

Achieving 100% renewables in electricity and heating by 2030

Reaching 100% renewables in electricity (2018) • Developing an extensive district heating network with combined heat and power generation and renewable energy technologies • Municipal energy management • Energy savings contracting in selected municipal buildings • Conversion of street lighting to LED • Citizen-related climate change mitigation projects, e.g., the campaign Klimaschutzbotschafter (climate ambassador) • Certification process for European Energy Award • Cooperating in climate change mitigation policy with various partners in Namibia

Motivating pupils to initiate their own climate change mitigation activities in schools • Sustainable mobility in rural areas • Securing European funding

GREECE



An urban green place for leisure and culture activities in downtown Agios Dimitrios

AGIOS DIMITRIOS

GREECE

Contact: Ilias Savvakis, isavvakis@dad.gr
Population: 70,970

Refurbishing public buildings • Smart metering • Sustainable urban mobility • Sustainable urban development

Reporting on sustainable development (e.g., Global Reporting Initiative, SDGs, UN Global Compact) • Mapping stakeholders • Energy retrofitting and energy management

Securing EU funding for climate action projects • Protecting and promoting the city's natural streams • Utilising crowdfunding for climate action implementation • Energy communities • Stakeholder engagement, especially in schools • Capturing data on energy savings and greenhouse gas emissions

DORIDA

GREECE

Contact: Epaminondas Trivillos, ntrivilos@gmail.com
Population: 13,627

EU funding opportunities • Protecting the natural environment

Reducing energy consumption by replacing street lighting lamps • Mapping municipal needs in terms of energy efficiency improvements

Reducing the energy footprint of the municipality • Implementing a Sustainable Energy Action Plan (SEAP) • Energy efficiency in public and private buildings, public lighting, and water pumping stations • Sustainable tourism • Co-benefits of climate action measures, e.g., local economy, public health • Raising awareness for and improving understanding of climate action measures among citizens

Lidoriki, capital of the municipality of Dorida. View of Mornos Lake

Homeric Hero Achilles and his mother Thetis – Bioclimatic regeneration of public space

FARSALA

GREECE

Contact: Ilectra Theloura, itheloura@hotmail.com
Population: 18,545

Confronting climate change confrontation • Contributing to the achievement of national and European objectives for environmental protection • Creating a realistic local climate action plan

Energy saving in municipal buildings • Bioclimatic regeneration in public spaces

Energy communities • Securing EU funding • Raising awareness for and improving understanding of climate action measures among citizens • Targeting the public through education and visible climate action measures • Improving the municipality's knowledge of financial tools and opportunities • Smart energy systems • Nexus of urban sustainability and cultural heritage • Sustainable mobility

KALAMATA

GREECE

Contact: Vassilis Dionysopoulos, vdionyso@kalamata.gr

Population: 69,849

Development of partnerships with other institutions to combat climate change • Reducing energy consumption of municipal infrastructure • Installing more PV systems on buildings and exploring the use of other forms of renewable energy • Strengthening existing recycling networks • Developing a strategy to expand the use of smart city technologies

Energy management of buildings • Urban redevelopment and bicycle paths • Effective management of green spaces and water • Recycling • Utilising information and communication technology (ICT) in climate action measures

Best practices from EU institutions • Securing funding for project implementation • Using smart city technologies and the Internet of Things to manage city infrastructure • Increasing public awareness of sustainable mobility and sustainable tourism • Integrated solutions for public buildings, renewables, and sustainable mobility

View of Kalmata from the foot of Mount Taygetus

St. Nicholas' Cathedral and the Vaporia neighborhood in Syros

SYROS-ERMOUPOULIS

GREECE

Contact: Michail Zouloufos, michalis.zouloufos@gmail.com

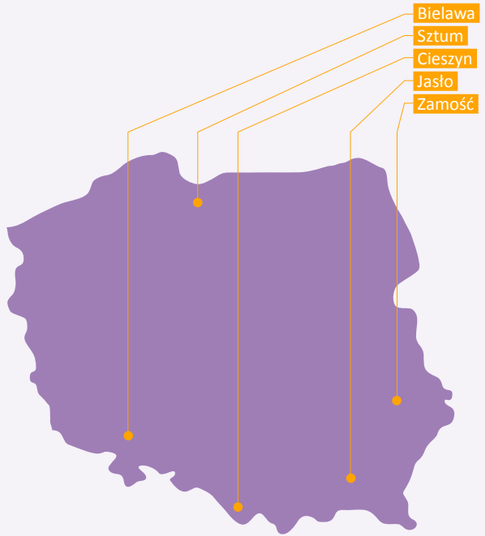
Population: 22,000

Creating a realistic local climate action plan • Reducing total energy costs and the energy consumption of public buildings • Reducing environmental footprint of water desalination units and of sanitary landfill operation • Sustainable tourism • Sustainable agricultural / farming activities

Waste and water management • Incorporating consideration of citizens' quality of life in climate action measures • Urban planning • Year-long tourism policies and activities • Collaboration with universities and the industry to write up project proposals

Energy communities • Municipal energy management • Securing EU funding • Increase environmental interventions • Possible change of legal framework

POLAND



Bielawa – model ecological city in the Sowie Mountains

BIELAWA

POLAND

Contact: Ewa Wnuk, wnuk@um.bielawa.pl

Population: 30,000

Bielawa as a model eco-town • Improving the quality of citizens' lives and the city's attractiveness for tourists • Improving air quality • Increasing the share of renewables in the energy mix

Ecological education • Thermal retrofitting of public buildings • Natural resources management

Reducing energy consumption • Involving citizens in climate action • Building bike lanes and making cycling an attractive mode of transportation • Inspiring climate action projects

CIESZYN

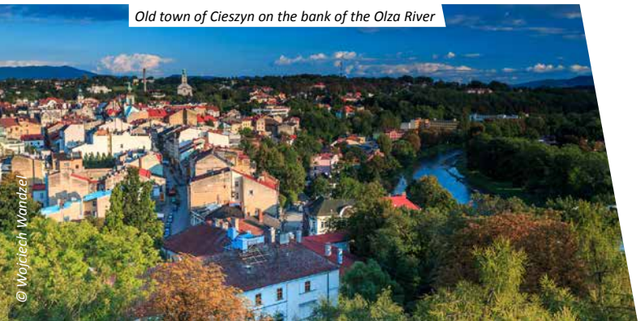
POLAND

Contact: Małgorzata Wegierek, ochrona@um.cieszyn.pl
Population: 32,924

Improving the air quality by changing the local energy mix and introducing energy-saving transport measures • Reducing energy consumption and costs • Increasing the use of renewable energy sources • Improving the attractiveness of the city for tourists

Smart city lighting • Thermal retrofitting of public buildings • Creating a local energy market (Cieszynski Energy Cluster) • Developing a low-carbon economy plan • Using a subsidy programme to replace the heat source in residential buildings

Developing a local strategy for e-mobility • Energy management in buildings • Increasing awareness among and engagement of citizens on climate action


Old town of Cieszyn on the bank of the Olza River

© Wojciech Wondze


Panoramic view of Jasło

© Wojciech Zebracki

JASŁO

POLAND

Contact: Agnieszka Piecuch-Mularska, a.piecuch-mularska@um.jaslo.pl
Population: 35,700

Improving air quality • Sustainable and efficient use of energy • Reducing final energy consumption and greenhouse gas emissions • Increasing the share of renewables in the energy mix

Implementing projects with national and European funding • Developing a Low Emission Economy Action Plan (LEEAP) • Monitoring and reducing energy consumption • Installing solar panels on public and private buildings

Effectively utilising renewable energy sources • Creating a sustainable (public) transport system • Proven measures for rational waste management • Creating urban green areas • Sustainable water management • Engaging civil society in climate action measures • Developing a climate strategy and managing human resources within the municipality to implement it

SZTUM

POLAND

Contact: Michal Mroczkowski, michal.mroczkowski@sztum.pl
Population: 18,000

Improving air quality • Tackling energy poverty • Energy efficiency in buildings • Saving energy in schools and other public buildings

Smart city lighting • Increasing the portion of renewable energy in the energy mix • Securing European funding at the regional level for renewable energy and energy efficiency projects • Developing a local energy cluster and connecting the municipality with local businesses and other municipalities

Energy cooperatives • Building a local energy market • Energy management in buildings • Efficiently managing water resources • Increasing awareness among and engagement of citizens on climate action • Improving cycling infrastructure


Panoramic view of Sztum

© Municipality of Sztum


City hall on the Great Market of Zamość

© Urząd

ZAMOŚĆ

POLAND

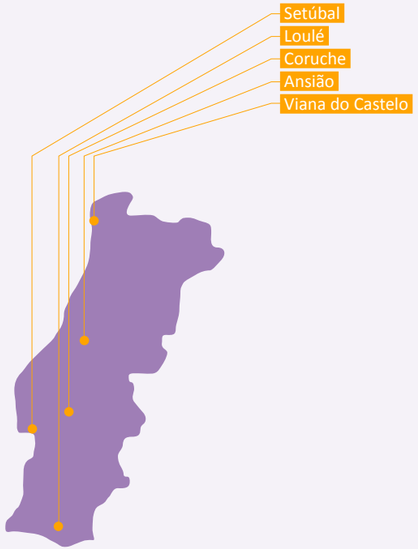
Contact: Bogusław Klimczuk, klimczuk@wp.pl
Population: 65,000

Climate action education • Improving air quality

Thermal retrofitting of public buildings • Sustainable public transport • Raising EU funds to finance energy efficiency and other climate measures • Creating a local energy market (Zamoyski Energy Cluster) • Designing urban green spaces

Innovative solutions for improving air quality, decreasing CO_2 emissions and other pollutants, developing a sustainable urban transport system • Increasing awareness among and engagement of citizens on climate action • Improving the energy infrastructure • Sustainable and efficient waste management • Engaging educational institutions on climate action • Ecological education in schools

PORTUGAL




© Municipality of Ansião

Past and present holding hands to a brighter future. Using wind power before it was cool.

ANSIÃO

PORTUGAL

Contact: Maria da Graça Campos Pinto, graca.pinto@cm-ansiao.pt
Population: 13,128

Reducing the energy consumption of municipal buildings • Real-time monitoring of the energy consumption in municipal buildings and incentivising behavioural and routine changes • Implementing a grid of electric charging stations in the main populated areas • Replacing the municipal vehicle fleet with electric cars in fixed routes • Introducing autonomous vehicles to support waste collection in industrial zones • Organic waste management and composting

Integrating citizens' daily lives with nature • Developing a municipal strategy to involve the population with the forest and fields, creating new attractions • Promoting trail running by allying sports with nature

Implementing environmental mitigation measures in low demographic density and dispersed population clusters • Raising awareness about utilising endogenous resources from a sustainable perspective

CORUCHE

PORTUGAL

Contact: Rosa Lopes, rosa.lopes@cm-coruche.pt
Population: 19,944

Implementing and monitoring the Sustainable Energy Action Plan – reduction of at least 20% of emissions by 2020 • Reducing the greenhouse gas emissions produced by coal ovens • Implementing and monitoring the Municipal Strategy and the Intermunicipal Plan for Mitigation and Adaptation to Climate Change

Water efficiency projects: efficient water management in green space irrigation – reuse of water from washing pool filters for irrigation • Energy efficiency: change public illumination to LED technology (investment of €792,796) • Energy efficiency: improving energy efficiency of public buildings (swimming pools, sports pavilion, and museum) • Promoting low carbon strategies and sustainable multimodal mobility (investment of €985,000)


© Municipality of Coruche

Coruche


© Municipality of Loulé

Loulé by night

LOULÉ

PORTUGAL

Contact: Lídia Terra, lidia.terra@cm-loule.pt /
Inês Rafael, ines.rafael@cm-loule.pt
Population: 70,622

Developing a Sustainable Energy and Climate Action Plan • Monitoring SDGs • Strengthening technical capacity within the municipal administration • Reinforcing internal governance and communicating between municipal services

Developing and implementing a Municipal Strategy for Adaptation to Climate Change (MSACC) and Municipal Plan for Adaptation to Climate Change • Promoting the Local Council, involving local stakeholders in MSACC implementation • Monitoring municipal climate action, including the development of the Municipal Observatory for Environment and Territory • Awareness and environmental education

Improving energy efficiency in schools and public buildings • Realising the energy transition on the municipal level • Measures to improve urban environmental sustainability • Territorial decarbonisation

SETÚBAL

PORTUGAL

Contact: Rute Vieira, rute.vieira@mun-setubal.pt
Population: 121,185

Pursuing more ambitious recycling goals • Creating a more circular economy producing less waste and using it in other processes • Engaging local industry to contribute to ambitious climate action and decarbonisation

Energetic efficiency in public buildings with LED technology • Environmental education in schools and with several campaigns • Waste management

Improving the capacity of municipal technicians on climate change mitigation • Supporting the implementation of local renewable energy projects • Developing and monitoring the implementation of SDGs in the region • Building good practices in urban metabolism to decrease ecological footprint

The Bay of Setúbal

© Municipality of Setúbal

© Municipality of Viana do Castelo

Viana do Castelo, Land of Sustainable Opportunity: Sea, River and Mountain

VIANA DO CASTELO

PORTUGAL

Contact: Elizabeth Pimentel de Matos, elizabeth@cm-viana-castelo.pt
Population: 88,725

Implementing local renewable energy projects • Creating a biomass/biogas plant to reduce emissions and produce renewable energy

Energy efficiency: Covenant of Mayors; public lighting; solar collectors and PV panels in swimming pools, pavilions, and schools • Energy production: wind farm and windfloat off-shore; biogas production at landfill site • Electric mobility: renewal of the car fleet for electric cars and bike; Mobi-E net-work/loading system • Climate change in local planning: public green spaces to reduce potable water; creating a monitoring committee for local strategies on adaptation and mitigation; environmental education to change consumer behaviour; project on fire prevention and fighting

Monitoring progress against sustainable energy and climate goals • Biomass and composting

ROMANIA

© Romulus Opriscan

Alba Iulia, the first Romanian city to test 100 solutions of a smart city

ALBA IULIA

ROMANIA

Contact: Gabriel Pleșa, gabiplesa_viva@yahoo.com
Population: 63,000

Decarbonising energy consumption in the main sectors, with priority given to public buildings • Increasing the amount of renewables in the local energy mix • Implementing a sustainable urban mobility strategy for a better standard of living for its citizens • Introducing and promoting smart solutions for citizens

Using renewables in the energy supply of public buildings • Integrating small-scale, smart solutions at city level in the mobility and energy sectors

Integrated energy management solutions for public buildings • Innovative financing solutions for sustainable energy projects • Creating a high level of awareness and involvement among citizens in the sustainable development of the city • Waste management

BUZĂU

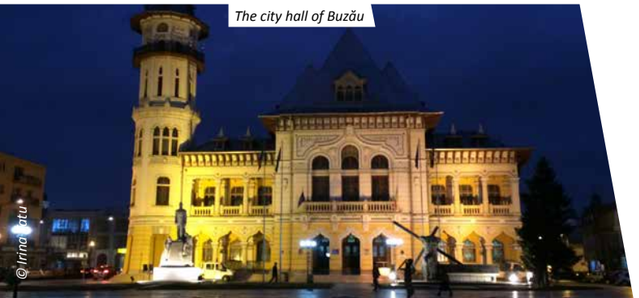
ROMANIA

Contact: George Florea, floreageorge1@yahoo.com
Population: 115,494

Implementing the Europe 2020 Strategy for smart, sustainable, and inclusive growth • Reducing CO_2 emissions by 20% by 2020 compared to 2015 levels • Increasing the energy efficiency of public and private buildings

Writing and implementing projects on energy efficiency funded through European structural funds; currently five projects with a value of €4.2 million ongoing • Renovating public transport stations and creating pedestrian areas • Waste management

Instruments for data collection regarding the consumption of electricity, natural gas, and heat supply • Measures to reduce the energy consumption in public and private buildings • Reducing CO_2 emissions from public transport • Increasing the efficiency of the public lighting system


© Irina Botu

The city hall of Buzău


© Deva Municipality

Aerial view of Deva Fortress and the city

DEVA

ROMANIA

Contact: Mariana Miha, mariana.miha@primariadeva.ro
Population: 69,000

Sustainable urban mobility, promoting public transport via electric buses and bike lanes • Retrofitting municipal buildings to reduce their energy consumption • Supporting owners and building associations in increasing the energy efficiency inresidential buildings • Developing/extending urban green spaces • Monitoring energy consumption in municipal buildings

Creating and implementing projects financed from European structural funds • Implementing energy efficiency measures in public and residential buildings • Monitoring energy consumption in municipal buildings

Communicating with citizens about climate actions and sustainable energy • Sustainable urban mobility • Green public procurement • Managing and creating synergies between urban planning documents

RÂMNICU VÂLCEA

ROMANIA

Contact: Mirela Turcu, mirela.turcu@primariavl.ro
Population: 118,398

Developing and implementing green projects aimed at reducing urban pollution • Improving the energy efficiency of buildings • Increasing the share of renewables in the energy mix • Efficient and sustainable waste management

Energy efficiency of buildings • Improving the energy efficiency of the public lighting system • Sustainable mobility

Innovative social and economic climate change mitigation measures • Solutions and tips for raising awareness and involving citizens in climate action • Obtaining support for the local administration's climate action measures • Identifying financing sources for climate action measures • Improving communication and coordination among the departments of local government

Zăvoi city park – rehabilitation example of urban green spaces through European funds


© Râmnicu Vâlcea Municipality


© Zalău Municipality

Zalău – Energy efficient building renovation & examples of sustainable mobility measures

ZALĂU

ROMANIA

Contact: Rodica Ciurte, ciurterodica@zalausj.ro
Population: 69,535

Reducing energy consumption in public buildings and public services • Sustainable mobility and the use of electric buses in the public transport system • Renewable energy production and use

Securing structural funds for energy efficiency investments • Renovating residential and municipal buildings, especially schools • Improving the efficiency of the public lighting system

Technical solutions to reduce energy consumption in public buildings and services • Tools for sustainable energy management • Solutions for adapting to climate changes • Managing and creating synergies between urban planning documents • Facilitating reduced energy consumption of private buildings • Incorporating climate actions into a general urban plan and in other urban planning documents

CONNECTING AND COLLABORATING AMONG SCHOOLS

BEACON's work in schools aims to understand the local educational context in the target countries, jointly develop and modify energy-saving models in schools, develop capacity and raise awareness for climate action among teachers and pupils, and share diverse experiences and best practices with other schools and policymakers. The project involves 45 schools from the Czech Republic, Romania, and Bulgaria as well as twelve from Germany.

The diverse range of activities is characterised by a participatory and holistic approach as all stakeholders in schools play a role in creating an open, comfortable, and energy efficient environment in which to learn.

© UfU e.V.

Hannover school participates in Global Climate Strike for Future on 15 March 2019

BEACON aims to promote behavioural change and achieve energy savings.

57 SCHOOLS

Project activities include:

- Analysing of **climate action in lessons plans and curricula** to identify potential gaps in learning goals and outcomes related to climate action
- **Workshops on climate change** with a range of stakeholders from schools and government to develop a joint understanding of the local context
- **Continuing education for teachers and administrators** to increase capacity to improve climate action education
- **Climate action days** for pupils to engage and motivate students
- Providing of **measuring equipment** to use in the classroom to facilitate and create hands-on learning experiences on energy
- Developing an **incentive system for realising energy savings** in schools to create a lasting model that can be scaled to other schools within the respective country
- Implementing of **concrete energy savings measures** to realise energy savings goals and plans
- **Study tours** from target countries to Germany to incorporate best practices and experiences from German schools

BEACON aims to promote behavioural change and achieve energy savings through these activities. Our work in schools should empower stakeholders to take practical measures to make a difference in the fight against climate change in their schools and communities.


© UfU e.V.

UfU staff explains quick response thermometer at a teacher training in Bulgaria

Bulgaria

15

Veliko Tarnovo	Vasil Drumev High School of Mathematics and Informatics
	St. Patriarch Evtimii Elementary School
	PR Slaveykov Primary School
Kilifarevo	Neofit Rilski Primary School
Pavel Banya	Nikola Y. Vaptsarov Primary School
	Hristo Botev High School
	Vocational High School of Restaurant and Hospitality
	General Skobelev Primary School
Sofia	56 Konstantin Irechek Secondary School
	79 Indira Gandhi Secondary School
	40 Louis Pasteur Secondary School
	90 Gen. Jose de San Martín Secondary School
Samokov	Nikola Velchev Sports School
	Otets Paisiy Secondary School
	Hristo Maximov Primary School

Teachers from Pavel Banya and trainers from UfU during the teacher training in Sofia

© NTEF

Pupils from 56 Konstantin Irechek Secondary School, Sofia

© NTEF

© Scoala Gimnaziala Ion Agarbiceanu

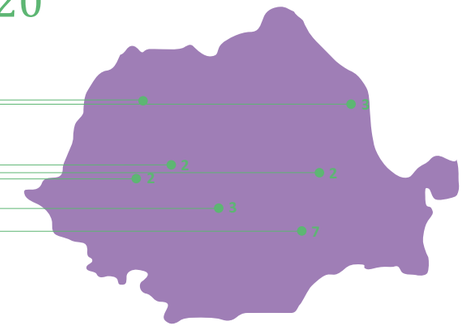
Students from Scoala Gimnaziala Ion Agarbiceanu in Alba Iulia discuss why climate change is important.

Pupils from Goethe Kolleg in Bucharest

© Goethe Kolleg

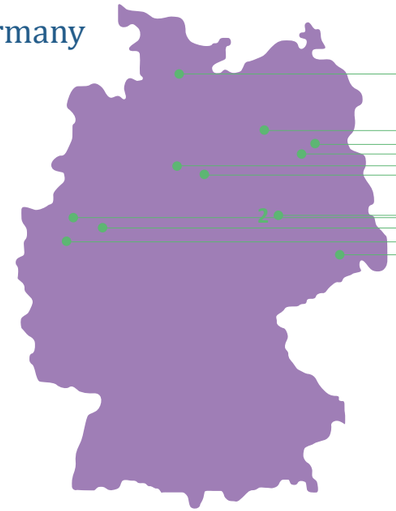
Romania

20



Zalău	Scoala Gimnaziala Simion Barnutiu
Barlad	Scoala Gimnaziala Episcop Iacov Antonovici
	Scoala Gimnaziala Manolache Costache Epureanu
	Liceul Tehnologic Petru Rares
Alba Iulia	Scoala Gimnaziala Mihai Eminescu
	Scoala Gimnaziala Ion Agarbiceanu
Buzău	Scola Gimnaziala Nr. 7
	Liceul Teoretic Alexandru Marghiloman
Deva	Colegiul Tehnic Energetic Dragomir Hurmuzescu
	Colegiul Tehnic Transilvania
Ploiesti	Colegiul Tehnic Lazar Edeleanu
Râmnicu Vâlcea	Scoala Gimnaziala Anton Pann
	Colegiul National Mircea Cel Batran
Bukarest	Scoala Gimnaziala Nr. 56
	DSBU
	Colegul National Kretelescu
	Goethe Kolleg
	Scoala Gimnaziala Nr. 20
	Scoala Gimnaziala Liviu Rebreanu
	Scoala Gimnaziala Cezar Bolliac

Germany



Norderstedt	Lise-Meitner-Gymnasium
Hohennauen	Kleine Grundschule Hohennauen
Eberswalde	Grundschule Finow
Potsdam	Grundschule am Humboldt-Ring
Hannover	Grundschule Beuthener Straße
Braunschweig	Realschule Nibelungen
Halle	St. Franziskus Grundschule
	Neues Städtisches Gymnasium
Bottrop	Josef-Albers-Gymnasium
Arnsberg	Städtisches Gymnasium Laurentianum
Düsseldorf	Martin-Luther-Grundschule
Pirna	Grundschule Graupa

12

Grundschule Beuthener Straße pupils create posters for climate action

© Grundschule Beuthener Straße

Teachers at kickoff meeting for schools partnerships in Hannover

© UfU e.V.

© BEACON

Measuring instruments are provided to participating schools

© UfU e.V.

Czech teachers participate in introductory workshop with UfU staff

Czech Republic

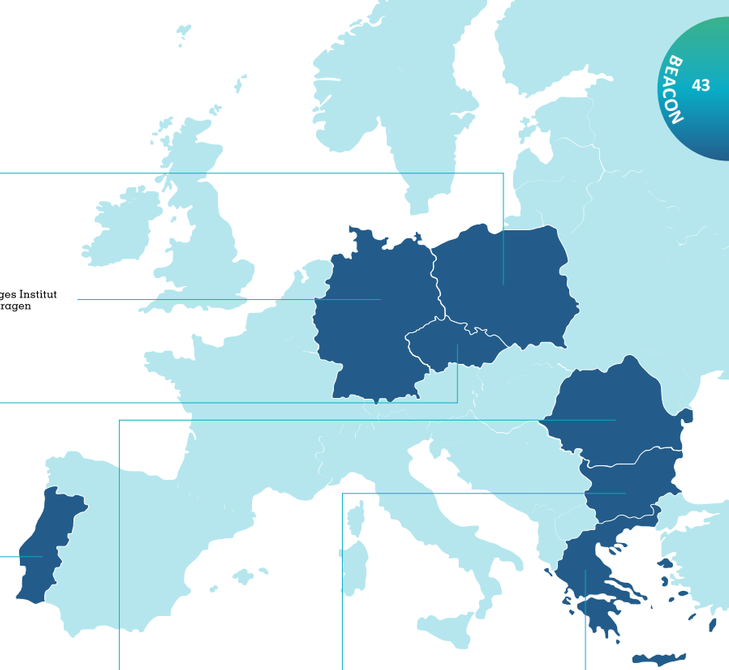
10

ZŠ Kněžice	Kněžice
ZŠ 5. Května	Rožnov pod
Radhoštěm	
ZŠ Pod Skalkou	
ZŠ Josefa Hlávky	Přeštice
1. ZŠ T.G. Masaryka	Milevsko
2. ZŠ Komenského	
Gymnázium Milevsko	
ZŠ a MŠ Josefa Kajetána Tyla	Písek
ZŠ Národní	Prachatice
ZŠ Zlatá stezka	

MEET THE TEAM

- Navigant
- adelphi
- Independent Institute for Environmental Issues (UfU)
- The Association of Municipalities Polish Network (PNEC)
- SEVEn, The Energy Efficiency Center
- National Trust Ecofund Bulgaria (NTEF)
- Energy Cities Romania (OER)
- ENVIRON Association
- Centre for Renewable Energy Sources and Saving (CRES)
- FCiências.ID – University of Lisbon
- Energy Cities

© Navigant



Network partner:

Visit the BEACON page on the EUKI website:
www.euki.de/euki-projects/beacon

Follow us on Twitter:
@EUKI_Climate

Email us at:
BEACON_HelpDesk@navigant.com

Editor: Kristen Brand, Navigant | Designer: Enrica Hölzinger

klimaneutral
natureOffice.com | DE-257-474539
gedruckt

On behalf of:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany

European
Climate Initiative
EUKI