

#Green Metz

METZ
CAPITAL
OF URBAN
ECOLOGY



LUTTER CONTRE LES INÉGALITÉS
PAR LA PROTECTION DE LA BIODIVERSITÉ ET DU CLIMAT

FIGHTING INEQUALITIES
BY PROTECTING BIODIVERSITY AND CLIMATE

G7 ENVIRONNEMENT | METZ 5 - 6 MAI 2019
ENVIRONMENT | METZ 5 - 6 MAY 2019





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FRANÇOIS DE RUGY

Ministre d'Etat,

Minister for the Ecological and Inclusive Transition

This year, it's France's turn to take on the presidency of the G7. And our country has chosen to make the fight against inequality the central theme of the 2019 summit. The environment is one of the main areas we need to act on to stem these inequalities: climate change and biodiversity loss affect vulnerable populations the most, accentuating inequalities.

The meeting of G7 environment ministers is an important occasion, therefore, for France to step up its commitment and take the other countries with it so that we can develop concrete initiatives together to protect the planet and safeguard vulnerable populations.

«Fighting inequality through biodiversity and climate protection» is the slogan of this G7 environment summit that the city of Metz is welcoming to the region. Metz meets many of the criteria that we set for selecting the city that would host the G7 Environment.

In terms of its geography, Metz is located at the heart of Europe, close to our leading partners such as Germany, Belgium and Luxembourg. It is a metropolis with easy access, especially by TGV, that shining beacon of French industry – and a form of transport that is environmentally friendly.

Above all, Metz is also a model city when it comes to the environment. It has succeeded in thinking one step ahead on many issues, and playing a pioneering role in France. It has been committed for many years to an ambitious policy designed to reduce its energy consumption and greenhouse gas emissions. Thanks to the mobilisation of its elected representatives and citizens, renewable energy now makes up a third of Metz's energy mix, which is higher than the target set by France for 2030. Taken together, all this means that Metz is a true ambassador for mobilization in France in the face of the challenges of climate change and biodiversity erosion.

In conclusion, we felt that the elected officials and local partners were strongly motivated to host this high-level event which, I am sure, will boost the attractiveness of the Metz region both nationally and internationally.



DOMINIQUE GROS

Mayor of Metz,
Vice-President of Metz Métropole

Metz will play host to the G7 Environment, Oceans and Energy Ministers meeting on May 5 and 6. As well as boasting all the infrastructure needed to handle this kind of event, we are proud of our excellent record in shaping our policies to meet the challenges of the environment, acting as a showcase for France.

Controlling our energy consumption and reducing our greenhouse gas emissions are key objectives for the city of Metz. Since 2008, we have invested a considerable sum – over 200 million Euros – in our energy policy. Our work is carried out in conjunction with our partners, who present their fields of action in the following pages. Nothing would be possible without them!

The result of this extraordinary financial effort is that a third of Metz's energy mix comes from renewable sources. In other words, across the Metz region as a whole, we have already exceeded one of the commitments made by France at the Paris Climate Conference scheduled for 2030.

I would also like to emphasise that urban ecology forms part of Metz's DNA. It is a concept that was conceived and put into practice here in the 1970s under the benevolent aegis of that distinguished son of Metz, Jean-Marie Pelt, who was the city's vice-mayor for twelve years.

Metz's sensitivity to the issue of ecological transition is also reflected in a number of local initiatives. The eco-citizen village we are organising in the Jean-Marie Pelt gardens on May 3 and 4, as a prelude to the summit, will be a further example of this.

Hosting the meeting of the G7 Environment, Oceans and Energy Ministers in Metz is of particular importance to us. Our city, backed by the citizen-led energy of the people who live here, will prove itself more than worthy of this major challenge.



JEAN-LUC BOHL

President of Metz Métropole, First Vice-President of the Région Grand Est, Mayor of Montigny-Lès-Metz

It is a genuine honour for Metz Métropole to welcome the international delegations of the G7 Environment and Oceans. Our region was chosen for this event because of the proactive approach we have been pursuing for many years in following the legacy of Jean-Marie Pelt, founder of the European Institute of Ecology. Jean-Marie's brilliant intuition is continued to this day in the initiatives we are undertaking in Metz Métropole. This balance between humans and nature, this Métropole of urban and human ecology, is always at the forefront of our minds.

Metz Métropole is leading the way in many areas – the Climate, Air and Energy Plan, the green and blue corridor, the black corridor – and has received a series of accreditations for its initiatives, such as Cit'ergie (for energy), Projet Alimentaire Territorial (for food) and Ecoréseau de Chaleur (for heating).

We're fully aware of the fundamental implications of ecology and sustainable development. We have constructed our urban project around these issues so we can meet the challenges of energy, economic and societal transition.

The arrival of the G7 in Metz Métropole is an acknowledgment of our commitment to ecology; it also represents a milestone in the implementation of our actions for future generations.

A world premiere of a selection of works by Yannick Monget, local author and futurist, will have a profound impact on each and every one of us. It will show us what the future of the planet could be – and undoubtedly will be – if we don't succeed in mapping out a new route that combines social progress in every country, newfound dignity for one and all, and the preservation of our living environment. This is the «realistic utopia» that Ivan Illich alluded to, «which allows every community and every nation to substantially choose its achievable utopia».

URBAN ECOLOGY

CENTRAL TO THE
DEVELOPMENT
OF METZ MÉTROPOLE

118,000 INHABITANTS

1 000 HECTARES

of natural, agricultural and forest areas – nearly
25% of the municipality's total area

52 M² OF GREEN SPACE

per inhabitant

ACCREDITATION AND CERTIFICATION

Ville Fleurie Quatre Fleurs (towns and villages in
bloom competition) since 1992; Four-star Eco-
friendly City; Pavillon Bleu (blue flag) award for the
city lake; Ecomaire (eco-friendly town council);
awards for participatory democracy; Jardin
Botanique de France et des Pays Francophones
(botanic garden award); Fair Trade Region

METZ

**METZ
MÉTROPOLE**

44 MUNICIPALITIES

230,000 INHABITANTS

NATURA 2000 SITE

Pelouses du pays messin

84 FARMS

CLASSIFIED SITE

du Mont Saint-Quentin

**ONE OF 22
FRENCH CITIES**

since January 1, 2018

ACCREDITATION AND CERTIFICATION

Zéro Déchet Zéro Gaspi (Zero waste and
zero refuse region); Positive Energy Region for
Green Growth; Cit'ergie; Ecoréseau de Chaleur
(eco-heating region), Territoire Vélo (cycling
region); Eco Cités; 2018 mobility award



As well as being a city with a substantial military heritage, Metz is the former capital of Lorraine and is marked by its industrial history. It has succeeded in preserving its superb natural capital and its identity as the cradle of urban ecology.

Metz has a two-fold accreditation as a green city and a garden city. Its natural, agricultural and forest zones occupy a quarter of the total area, which is crossed by 22 kilometres of rivers and streams. Metz is integrated into the metropolitan region's extensive green and blue corridor. Three hundred kilometres of waterways criss-cross the damp valleys, limestone hills, wetlands and agricultural land that make up half of its area.

It was in the European Institute of Ecology, founded by Jean-Marie Pelt, a native of Metz, that urban ecology was born in the early 1970s. The idea was immediately translated into pioneering activities across France, such as the development of non-fossil energies and initiatives to preserve water and the natural environment in urban centres.

After the army withdrew from the region, Metz embarked on a series of transitions: economic and technological, social and demographic, energetical and environmental. Metz has invested in its assets in an attempt to put a stop to the demographic decline and boost the city's appeal: not just art and technology but also (and above all) quality of life and civic engagement, both of which are so fundamental to urban ecology. To consolidate Metz Métropole's appeal, the local authority has devised its own urban strategic project with over 200 regional partners.

The scheme has three ambitious goals for the métropole of the future, including the objective of becoming a "city dedicated to urban and human ecology". Its identity is based on its remarkable regional diversity and attributes: its sites of all shapes and sizes together with its different types of habitat, biodiversity and activities. Our goal is focused on four main challenges: the food and energy

transition; nature and its uses; urban intensification; and social action and human services.

Metz and Metz Métropole boast a number of accreditations for environmental excellence that reflect both the progress that has been made to date and the ongoing drive for improvement.

Metz Métropole is now one of the 22 largest cities in France. Metz has all the expertise required to deliver major structuring policies for the ecological transition: urban planning and policy, water, waste, energy and climate, and economic development.

Metz's mission remains unchanged: to listen to its citizens and to protect the most fragile among us. Our policies centre on early childhood, education, seniors, social action and participatory democracy, as well as managing green spaces and keeping the city clean. Faced with these urgent global issues, Metz and Metz Métropole are working side-by-side to ensure that the transition will be ecological and inclusive.

Metz and Metz Métropole, together with the people living here and the socio-economic stakeholders, are sharing responsibility as we face the challenges that are emerging both locally and worldwide: global warming and climate change; decreasing biodiversity; urban sprawl; increasingly scarce natural and fossil resources; an aging population; and the rise in social and environmental insecurity.

These collective actions are strengthening the quality of life in the region and its attractiveness today and for future generations.

This brochure was produced in spring 2019 to mark the G7 of Ministers of the Environment and Oceans in Metz. It presents Metz and Metz Métropole's areas of expertise in five key areas of urban and human ecology, as conceptualised in Metz: nature in the city, energy, mobility, waste and environmental democracy.



A REGIONAL PIONEER

URBAN ECOLOGY
WAS INVENTED IN METZ PRIOR TO THE CONCEPT OF SUSTAINABLE DEVELOPMENT

1970 IN METZ
European Institute of Ecology founded by Jean-Marie Pelt; birth of urban ecology in Metz.

Aalborg Charter on Sustainable Cities.
1994 IN EUROPE

Waste Recovery Centre opened, operated by HAGANIS, including an energy recovery unit for non-recyclable waste: 28,000 tonnes of CO₂ avoided in 2018.

2001 IN METZ

METZ SURPASSES EUROPE'S ENERGY AND CLIMATE GOALS

Work campaign begins in city's municipal buildings: 37% reduction in CO₂ emissions between 2008 and 2016 and 13% reduction in energy consumption in five years – surpassing the 3x20 objectives of the European Climate Package / Merger of the two historic heating networks: the urban system becomes the longest in France (115km) and the first of this length to be supplied with renewable energies / Opening of Espace Info Energie / "Zero phyto" policy adopted for maintaining roads and green spaces.

2008 IN METZ

Covenant of Mayors signed / First zone de rencontre (road where pedestrians have priority).

2009 IN METZ

Cycling plan
2010 IN METZ

2010 IN FRANCE

First of two Grenelle laws adopted to reduce phytosanitary products, plus application of the «3 times 20» objectives for reducing GHG emissions, energy efficiency and renewable energies.

METZ BEGINS
ITS ECOLOGICAL
TRANSITION AHEAD
OF SCHEDULE

Inauguration of the Metz Chambièrre biomass plant. Results: 30% renewable energies in the energy mix in 2013, a three-fold rise in five years (above the European target).

2012 IN METZ

Inauguration of METTIS busway (bus rapid transit system).

2013 IN METZ MÉTROPOLE

2014 IN METZ

Tree Charter adopted with Metz and partners committing to preserve the 30,000 trees in public spaces / Launch of Seille land-restoration work.

Energy transition law adopted on circular economy, sustainable consumption, and 32% renewable energy targets in final energy consumption by 2030.

2015 EN FRANCE

Pelouses du Pays Messin classified as a Natura 2000 site.

2010 IN METZ MÉTROPOLE

Regional Climate, Air and Energy Plan adopted, one of the first plans in France to incorporate air quality / Zéro Déchet Zéro Gaspi (zero waste, zero refuse) accreditation / QuattroPole Mayors Climate Declaration adopted in Metz upstream of COP21.

2014 IN METZ MÉTROPOLE

Green and blue corridor defined.

2015 IN METZ MÉTROPOLE

Loi pour la Reconquête de la Biodiversité, de la Nature et des Paysages (biodiversity, nature and landscape law) and law against food waste.

2016 IN METZ

Water Management Award for Innovative Cities.

2016 IN METZ MÉTROPOLE

Cit'ergie accreditation.

2016 IN FRANCE

2017 IN METZ

20% organic and / or local products in school canteens / Metz awarded Positive Energy Region accreditation.

Loi Labbé prohibiting the use of pesticides in public green spaces.

2017 IN FRANCE

2018 IN FRANCE

Loi Egalim requiring 20% of products in catering sector to be derived from organic farming by 2020.

METZ MÉTROPOLE
CONSOLIDATES
ITS LEAD

Participatory budget launched, becoming France's first participative eco-citizen budget in 2019.

TWO LOCAL AUTHORITIES
PIONEERING
ENVIRONMENTAL
DEMOCRACY

2014 IN METZ

2017 IN METZ

300 proposals emanating from the consultation with residents and local partners for the new project devoted to a sustainable and united region.

2018 IN METZ MÉTROPOLE

Urban and human ecology included as key parts of the metropolitan project, devised by Metz Métropole and 200 regional actors.

Ecological transition, democracy and citizenship are flagship themes in the National Debate initiated by the French President / Draft law on the circular economy.

2019 IN FRANCE



NATURE

A GARDEN
REGION

A B(L)OOMING NATURAL CAPITAL

Metz owes its reputation as a green city to its vast wealth of public green spaces: 625 ha or 52 m² per inhabitant (well above the 48 m² average for France's 50 largest cities!). Parc de la Seille, renamed Jardins Jean-Marie Pelt, was the first major urban infrastructure project to be built in the new Amphithéâtre District in 2002. A variety of development projects are emerging on hospital and military wasteland with the aim of densifying the city centre and the area around the METTIS transport network, which will restrict urban sprawl and the consumption of agricultural land.

The environmental diversity – small valleys, hills, woods, fields and wetlands – means that our green spaces and the way they are used requires careful management on the part of Metz Métropole to preserve – and roll out – the green and blue corridor. The main development projects of the new metropolis include using ecotourism to showcase the military forts on Mont Saint-Quentin that have become overgrown; **reintroducing eco-grazing and preserving the biodiversity protected on a European level on the Pelouses du Pays Messin, a classified Natura 2000 site**; developing or restoring pools and ponds; and renaturing streams. When it comes to finding a balance between agriculture and tourism, and hunting and sporting activities – all the while preserving the local fauna and flora – Metz Métropole plays a major coordinating, assessment and planning role.

SPECIAL ATTENTION GIVEN TO TREES AND NOCTURNAL WILDLIFE IN URBAN AREAS

Metz has been maintaining its green spaces without the use of pesticides and employing differentiated management since 2010. It also cares for over 30,000 trees in accordance with the principles of the Tree Charter, a commitment and good practice document shared with other public and private stakeholders responsible for preserving urban trees.

Metz Métropole is aware of the ecosystem services that trees provide in cities, as well as the threats they face in the urban environment and as a result of climate change. Both Metz and Metz Métropole embarked on a study in 2017 to investigate the eco-systemic benefits of different species of trees, known as SESAME.



« LET'S TURN METZ GREEN! »

And nature continues to thrive in the city! « **Végétalisons Metz – Let's turn Metz green!** » is the slogan behind the call for projects launched by Metz Town Hall in March 2019. With the help of the city of Metz, the scheme is designed to encourage residents, associations and developers to replant the public spaces they frequent in their day-to-day lives: outside buildings, green spaces and pavements.



GREEN SPACES FOR THE COMMON GOOD

Metz is a city of flowers and a «garden city» – or rather a city of gardens, with **800 kitchen gardens** for growing produce and meeting people; **71 recreational areas**; and **22 multi-sports fields** for exercising. Since 2010, the “Art dans les Jardins” event has introduced people to works of art in our parks and gardens. It is part of the Constellations de Metz summer cultural season, which attracted **nearly a million visitors in 2018**. Just like the city’s architecture, museums and gastronomy, the parks and gardens of Metz are a part of the Métropole’s identity and what makes it attractive. Guided tours of the gardens and remarkable trees are regularly offered by the guides from the Inspire Metz Tourist Office. To mark the G7 of the environment, 15 weekly guided visits on foot, bicycle or public transport were offered to people curious to discover Metz’s remarkable urban ecology sites.

At the request of residents who took part in the six editions of the participatory budget, improvements have been made to the gardens with explanatory panels on biodiversity, educational trails, orchards, composting areas, games for children and sports facilities. Residents, neighbourhood associations, Metz and Metz Métropole are working together to implement these projects.

FOOD AND AGRICULTURAL TRANSITION

Since 2010 Metz Métropole has had a strong commitment to peri-urban agriculture across the region that is also multi-functional, diversified and sustainable. Metz Métropole has built an experimentation centre for agricultural and food transition on the site at Frescaty Plateau: **the Agrobiopôle, with 70 ha available to project holders** for developing (mainly organic) market gardening intended for local consumers.

FIGHTING LIGHT POLLUTION

Thirteen pioneering municipalities in Metz Métropole have decided to turn off their street lighting at night. The aim is not only to control energy consumption but also to help preserve the many nocturnal species found locally– including 23 different species of bat! Metz Métropole will carry out an assessment of light pollution in all the municipalities to create an effective “black corridor”. It will also draw up a better Lighting Guide to raise awareness in the municipalities, businesses and individuals about the importance of biodiversity and energy transition in relation to night lighting.



NOÉ-NOAH EUROPEAN PROJECT ON THE ENVIRONMENT AND SOCIAL INCLUSION



Metz, Metz Métropole, the Centre Pompidou-Metz, the Bliiida “third place”, the European Institute of Ecology and the University of Lorraine are among the 25 partners taking part in the NOE-NOAH (INTERREG VA) European project. This cross-border network of joint activities promotes citizen-led ecological reconnections in the Greater Region. In Metz, the pop-up summer garden in the Place de la Comédie is one such action, as well as the upcoming exhibition on Giuseppe Penone at the Centre Pompidou-Metz and the planted and connected urban furniture at Bliiida.



STUDY ON THE SYSTEMIC ECOSERVICES PROVIDED BY TREES

The SESAME study is a European first: it aims to design a methodological tool to help public developers choose the right species of tree and the right location according to their qualities, the services they provide and climate change. Ninety species of trees are being examined in the local context based on five different themes: air quality, local climate regulation, biodiversity, landscape and the living environment. The study is being conducted in partnership with CEREMA, the centre for studying and assessing risks, the environment, mobility and development.





WATER PRESERVING, CONTROLLING AND RECOVERING OUR BLUE CAPITAL

Water is everywhere in Metz and Metz Métropole! Metz Métropole has been responsible for handling the water cycle from start to finish since 2018: drinking water, sanitation, managing aquatic environments and flood prevention.

LIFE ON THE WATER'S EDGE

The city intends to recover this blue capital by promoting multiple, responsible uses.

Located five minutes from the city centre, the "Plan d'eau" was built in 1974 when the A31 was being constructed. This urban lake boasts **7.2 hectares of meadows and walks; a marina with Pavillon Bleu accreditation**; an exhibition area with photos about biodiversity; a pontoon for handicapped fishing; and explanatory panels on biodiversity produced by residents and city departments.

The Technopôle campus – Metz's technological park – was built near two large lakes (holding ponds) on the model of American landscaped technology parks. A significant area has been set aside for planting and walks (**10 hectares around the two lakes**). The banks of Lake Ariane, with a wealth of wild flora, are home to many birds used to wet habitats. Several paths mean it is possible to go around the lake on foot or by bike through a beautiful rolling area measuring 4 ha.

Metz has also begun to win back its blue potential with the renaturation of the Seille, a unique project in terms of its length and location in the heart of the city!

RENATURATION OF THE SEILLE: A UNIQUE PROJECT IN THE HEART OF THE CITY

From 2014 to 2017, **1.5 million Euros** worth of work was carried out with the support of the Water Agency to renature the Seille. The project was exceptional given the urban location and the length of the river: **nearly 4 kilometres of water was treated on its journey across the town!** The river banks were softened, and reed beds and meadows were created. In addition, curves were introduced into the river to facilitate the flow and encourage the reproduction of aquatic fauna. As a bonus, biodiversity has developed and the water quality improved. The landscape has also been enhanced and accessible walking areas and shared gardens developed on the riverbanks, incorporated into the Jean-Marie Pelt gardens.



A SMART AND CONTROLLED WATER CYCLE

On July 1, 2019, the m³ rate will switch from € 3.36 to € 3.09 in Metz and the 27 municipalities that are part of the Syndicat des Eaux for the Metz region (SERM) under a concession agreement with Veolia / La Mosellane des Eaux. This reduction is the result of the heavy investment made in the system over the last ten years, which has boosted productivity from 73% in 2008 to 86% in 2017.

Water management from source to tap is a priority shared by Metz and Mosellane des Eaux in a context marked by climatic disturbances that weigh on the quality and quantity of water in the three historical sources in the Metz region: the Gorze, the Rupt de Mad and Lake Madine. Metz and Metz Métropole are participants in the Agri Mieux and Atelier des Territoires approaches alongside government agencies and all stakeholders involved in protecting the water resources of the Rupt de Mad.

In addition, the **smart networks** are now proving their full usefulness. Between 40,000 and 45,000 m³ of water a day transits from the Moulins-Lès-Metz plant over a network of 834 kilometres. Twenty-five flowmeters are used to cut down on wastage by ensuring that only the required amount of water is drawn. The Geographic Information System on Pipeline Installation provides the information needed for making precise interventions on the ground and for planning maintenance and rehabilitation work.

The remote metering system, installed in 2015, targets leaks and failures directly in housing: **3,000 homes have already been contacted regarding unusual over-consumption.** The next step in this smart water chain is to encourage users to install individual metres so they can monitor their consumption as closely as possible.

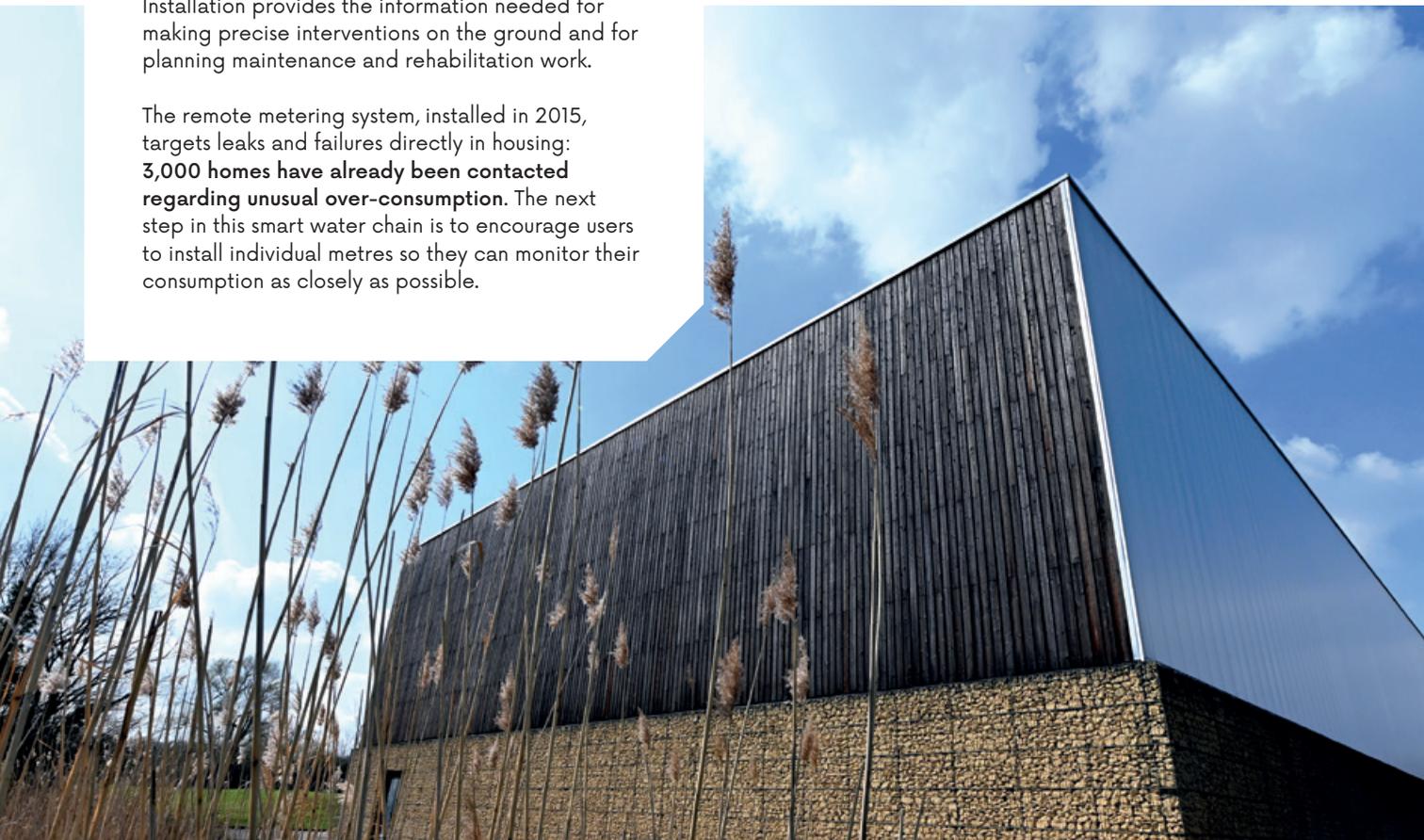
WATER: ENERGY RECOVERY

Water has been an important source of energy in Metz since the twentieth century! Here are three examples from yesterday and today.

UEM supplies Metz with electricity from its three hydro-electric plants. The output – which is directly influenced by the flow of water – is 100% ecological. The **total hydro-electric production was 36.3 GWh in 2018.**

A wind turbine was installed in 2018 to supply the water pump used for the 60 shared gardens in Parc de la Seille. The project received the financial support of the Ministry of Ecological and Solidarity Transition as part of the Positive Energy Region for Green Growth accreditation.

In addition, **the first zero-CO₂ emission gym in Metz** was opened in early 2019. **The venue is powered by hydro-electricity** and heated by a heat pump that recovers the water from the drinking water tanks next to the gymnasium. The roof has been clad in 800 m² of photovoltaic panels to compensate for the CO₂ emissions resulting from users' travel movements.





ENERGY

A WINNING MIX
BASED ON STRONG
POLITICAL WILL
AND INVESTMENT

Renewable energy in Metz accounts for 48% of the city's energy supply. Metz's energy transition is based on a combination of a political will and ambitious goals backed by action plans and major investment. And the city has some key allies: not just the UEM Group (its local distribution company) but also the local Energy and Climate Agency and the Community Social Action Centre.

STRONG AND SUSTAINED POLITICAL WILL

Metz signed the European Covenant of Mayors in 2009 with 250 other European mayors. This act signalled **Metz's commitment to go beyond the objectives set for Member States:** for 2020, it is committed to reducing its energy consumption by 23%, reducing its greenhouse-effect gas emissions by 50%, and increasing the share of renewables in its energy mix to 43%. The energy retrofit programme means it has taken the lead from 2015 in meeting these objectives.

In 2019, Metz adopted a new Climate Plan, which aims at reducing its greenhouse-effect gas emissions by 40% for 2030 and facing the climate changes.

After adopting its Energy Climate Plan in 2012, Metz Métropole integrated added a section on Air Quality in 2015, thereby adopting **one of the first Regional Climate, Air and Energy Plans.** Metz Métropole embarked on the European Cit'ergie initiative in June 2015 to ensure that its Climate, Air and Energy Plan is based on exemplarity, evaluation and continuous

improvement. In early 2017, it was awarded Cit'ergie accreditation after reaching more than 57% of its potential. **Metz Métropole is now the third largest French city,** just behind Lyon and Rennes, thanks in particular to its projects for rallying residents, municipalities and businesses, together with its innovative initiatives and ambitious actions regarding mobility.



HEAVY INVESTMENT IN INFRASTRUCTURE

In 2008, Metz launched a major energy-efficiency programme targeting its most energy-hungry municipal buildings – gymnasiums, swimming pools and schools – as well as renovating its public lighting. Fifteen million Euros has been dedicated to this six-year programme, including improved insulation and the use of renewable energies. The investment means that the gains made in Metz have surpassed the European Climate Package's 3 x 20 targets: **a 29% reduction in CO₂ emissions between 2008 and 2014 together with a 13% reduction in energy consumption in five years.**

The biomass power plant was built on the site of the Metz-Chambière thermal power station in 2012, supplementing the heating and electricity co-generation system and recovering energy derived from waste incineration.

The investment of 50 million Euros quickly paid off: **30% of the city's 2013 energy mix came from renewable sources, a three-fold increase in just five years (surpassing the European objective).**



UEM: THE POWER BEHIND THE REGION'S ENERGY

UEM is the first **Local Energy Distribution Company**, with 85% of its capital held by the city of Metz. Founded in 1901, UEM supplies over 160,000 customers in and around Metz with electricity, gas and urban heating. UEM recovers local energy resources, drawing on **three environmentally-friendly hydro-electric plants**, the Metz-Chambière heat and power cogeneration plant and the biomass unit adjacent to it. Wind and photovoltaic farms are also operated on a sustainable basis in Moselle, Meurthe-et-Moselle and as far as Bouches-du-Rhône for UEM's specific needs and to meet the growing demand for electricity while cutting back on greenhouse gas emissions. UEM is also a major smartgrid player thanks to its **e-fluid software package**, the **leading information system for utilities**.

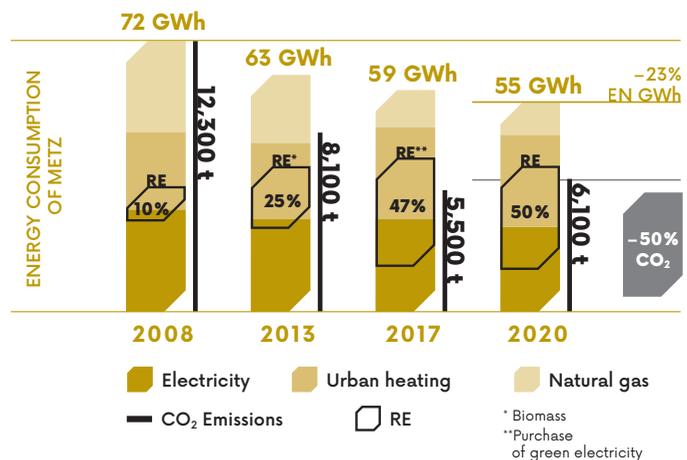
In a virtuous circle of the local circular economy, the UEM biomass plant uses **100,000 tons of wood from forests within a 100 km radius of Metz**, provided by the National Forest Office, a cooperative of private foresters, and Haganis.

In 2017, 4.7 million Euros were invested in Metz's urban heating system, which is the **third longest heat network in France (115km)** and the **largest network chiefly supplied by renewable energies (over 60%)**.

The network serves the equivalent of 44,000 three-roomed apartments, including many public buildings such as the Centre Pompidou-Metz, Les Arènes and Metz Hospitals. Operated by UEM, it has now been handed over to the Métropole and has been awarded Ecoréseau de Chaleur accreditation by AMORCE.

OBJECTIVES FOR 2020

23% reduction in energy consumption (GWh), 50% reduction in CO₂ emissions (done), increasing the share of renewables (RE) in the energy mix to 50%.



Source : Metz Town Hall, 2018



HOUSING ENERGY RETRO-FITS, A COLLECTIVE CHALLENGE

Every year, every resident in Metz Métropole releases an average of 15.3 tons of CO₂ into the atmosphere, largely as a result of travel and a lack of house insulation. The local authorities in Metz and their partners meet the challenge of reducing the energy needs of residents and controlling building energy!

LOCAL ENERGY AND CLIMATE AGENCY HELPING THE LOCAL ECONOMY AND SAVING HOUSEHOLDS MONEY

The Pays Messin Local Energy and Climate Agency was founded in 2011 by Metz and Metz Métropole. The agency provides free, independent support to over 1,300 households, 40 apartment blocks and 50 municipalities that are keen on saving energy and limiting their greenhouse gas emissions. **742 tons of CO₂ were saved in 2017** thanks to advice and information given by the agency, together with individual technical support and group sessions.

The Agency has developed an engaging and novel communication approach with the annual «Energie en Fête» family festival. It has organised 30 “energy aperitifs” in private homes and **three escape games for the general public**. It has also inspected houses and apartment blocks using a thermal camera on 13 “thermographic walks” in the municipalities.

ALEC mobilises and trains **professional actors in the building, property and financing sectors**. Following the intervention of ALEC advisers, the work undertaken is often more substantial and aims at higher performances. These investments mainly benefit businesses and the local economy.

SPECIAL COACHING FOR CRAFTSMEN AND WOMEN

Metz Métropole runs the Eco-Challenge campaign for craftsmen and women and traders in the region in partnership with the Moselle Chamber of Trades and Crafts. Since 2015, **46 companies have already implemented 158 initiatives**, such as switching to LED lighting or their insulating premises; supplying organic and / or eco-labelled products; eliminating packaging; and recovering water. These businesses receive free support from advisers at Metz Métropole and the Moselle Chamber of Trades and Crafts.

COMMUNAL CENTRE FOR SOCIAL ACTION COMBATS FUEL POVERTY

The energy voucher usage rate is 65.06% in Moselle compared to 62% nationally, which demonstrates the need to disseminate more information to the public on ways to reduce energy consumption, prevent unpaid bills and avoid energy vulnerability.

CCAS organises monthly community information meetings on energy vouchers and eco-friendly actions: ten meetings were organised in 2018 for 60 participants, with **60 My Natural Health workshops** run by the CPN Coquelicots Association. Twelve people on average took part in each workshop on the following themes: affordable cooking, urban walks, manufacturing natural products and creating mini-gardens. In 2018, CCAS distributed 59,000 Euros of financial assistance for energy.





MOBILITY

ROAD NETWORK
SHARED BETWEEN
SUSTAINABLE FORMS
OF MOBILITY

Car travel is the main source of greenhouse gas emissions in Metz. The municipality and Metz Métropole have invested heavily since 2008 to reduce their carbon footprint and improve the urban living environment and health of local citizens. The aim is to cut down on car use in town in favour of soft modes of transport and public transport.

In parallel with these actions for improving services, the city of Metz and Metz Métropole have implemented a parking pricing policy that encourages the circulation and use of public transport and active modes. Cars have gradually given way to other sustainable modes of transport on the roads of Metz since 2008: cycling and METTIS. **126 kilometres of road are now in zone 30, encouraging people to share the network between these different modes.**

FRANCE'S FIRST "ZONE DE RENCONTRE" (ROAD WHERE PEDESTRIANS HAVE PRIORITY)

In 2009 Metz became the first French city to experiment with zone de rencontre pedestrian zones in four squares in the very centre of the town. Pedestrians, bicycles and cars now co-habit in five squares located on the border of the pedestrian centre.

A BICYCLE-FRIENDLY REGION

Metz Métropole began drawing up its Cycling Master Plan in 2017 in anticipation of acquiring its status as a bicycle-friendly area on January 1, 2018. The aim is to **create a 180 km cycle network, which means building or redeveloping 100 km of cycling infrastructure together with a dedicated budget of 15 million Euros.** In 2019, the city renewed its Territoire Vélo accreditation for the entire urban area.

In Metz, 1150 parking spaces and closed garages designed for two wheels have been built at the request of residents. Solutions involving bicycle rental, purchase and repair are diversifying.





A HIGH-PERFORMANCE PUBLIC TRANSPORT NETWORK

The major initiative conducted by Metz Métropole in recent years has been the October 2013 commissioning of **METTIS, two bus rapid transit system lines**. The 27 buses are equipped with hybrid engines that provide a 20% saving in fuel consumption with reduced noise levels.

The urban development work has also been substantial, with the creation of 18 km of dedicated site, the restructuring of the transport network LE MET', and the building of a Multimodal Exchange Centre at the rear of Metz station together with three park-and-ride Parking-Relais and a Mobility Agency. Traffic on the LE MET' network has risen sharply, from 15.5 million trips in 2011 to **22.3 million in 2018 – an increase of nearly 44 %**.

FULL STEAM AHEAD FOR ELECTROMOBILITY!

The local authorities are leading by example, developing their own fleet of electric vehicles. Metz Métropole has ordered two electric minibuses, three new hybrid rapid-transport buses and three standard hybrid buses, all of which will reduce noise pollution and GHG emissions.

Twenty-eight electric charging stations have already been installed in car parks across Metz Métropole, and UEM is committed to two ambitious projects: installing eight charging stations in the city of Metz via its Connect & Go network; and setting up a corridor for local distribution companies in Alsace-Lorraine. UEM is also installing and monitoring charging stations for customers in Greater Metz and in other regions with Advenir-accredited services.

AIR QUALITY HAS NOT BEEN OVERLOOKED!

The study on the impact of METTIS emissions, carried out by ATMO Grand Est, shows that between 2012 and 2014 **the kilometres served by the network increased by 11% but pollutant emissions dropped by up to 21% in some parts**.

In addition, since March 2015, a number of initiatives have been introduced by Metz Métropole to encourage the population to use public transport in the event of spikes in pollution: information measures (information threshold reached), incentive pricing (in the event of a warning threshold) and free admission (if the alert continues).

ELECTROMOBILITY ATTRACTS JOBS TO METZ MÉTROPOLE!

The PSA Group and Nidec Leroy-Sommer, France's leading manufacturer of electric engines, are investing 220 million Euros in the Trémery site to construct the engines for 100% electric vehicles and hybrids. The investment will create 100 R&D jobs and hire 400 people, who will manufacture 900,000 engines on the Moselle site within five years. It's a major symbolic and technological turning point for the factory that was once the largest diesel engine production plant in the world!



WASTE ON THE WAY TO BECOMING A ZERO WASTE, ZERO REFUSE REGION



Reducing waste first, and then recovering what's left – that's the aim of the waste policies adopted by the Metz local authorities to achieve the goal of Zéro Déchet Zéro Gaspi – Zero Waste, Zero Refuse – accreditation. The authorities are backed by the technical know-how at Haganis (the local district-controlled company) and by a range of novel private and associative initiatives. There are three priorities: combating food waste; encouraging the circular economy through waste recovery; and social inclusion.

COMBATING FOOD WASTE IN MASS CATERING

Reducing food waste in school canteens is one of Metz Métropole's flagship initiatives as part of its Zéro Gaspi Zéro Déchet accreditation.

Metz Métropole has been running the Schools since 2012 with the educational programme "Schools: From Recycling to Reducing Waste". The scheme **teaches over 1,500 students a year about sorting and reducing waste** in conjunction with the Inspectorate for Schools. 22 school restaurants in Metz Métropole receive support from the Unis-Cités Association and Organeo, a local research office, to generate less waste and enhance the children's enjoyment of their meals.

By 2020, 42 restaurants will have been reviewed and given assistance for implementing these initiatives. In addition, the city of Metz is studying the possibility of **recovering the 56 tonnes of bio-waste produced by the central kitchen and school**



restaurants via a global supply contract, linking the purchase of sorting tables, organising a collection system and recovering biowaste.

COMPOSTING: MOBILISING ALL RESIDENTS

Metz Métropole has helped more than 9,000 households with their individual composting since 2010 by providing equipment and advice to reduce the weight of their bins by 30%. Eighty composting sites have been installed outside buildings, 22 establishments equipped and five sites set up at neighbourhood level for community composting. Metz Métropole is also assisting 30 households with vermicomposting. Launched in 2019, this approach will be developed in 2020 to equip 100 households. **Composting means that over 1,900 tons of waste on average can avoid having to be treated a year in the Metz Métropole region.**

REUSING OBJECTS

Objects, clothes and books – they all end up having a second life in Metz Métropole thanks to the partnerships developed with integration and solidarity stakeholders. Metz Métropole, in partnership with Emmaüs and HAGANIS, launched the Zéro Gaspi collections in

2016 on Saturdays in waste disposal centres. On average, **40 tons of objects are reused every year** thanks to these collections.

Since 2013, Metz Métropole – in partnership with the inclusion company Tri d'Union – has been devising ways to collect and reuse textiles, household linen and shoes. In 2018, **280 tons were collected, with 60% finding a second life and 39% recycled.**

In 2018, a new channel was introduced for collecting books in Metz Métropole in collaboration with Recyclivre, which won the 2018 CSR Grand Est Award in the regional partnership category. **For the first year in 2018, 42,000 books found a second life through reuse or recycling.**

THE HAGANIS WASTE RECOVERY CENTRE: A MODEL OF THE CIRCULAR ECONOMY

Haganis, the local district-controlled company for Metz Métropole, commissioned its Non-Hazardous Waste Recovery Centre in 2001. It occupies five hectares next door to the urban heating and electricity production plant, the motorway and the urban zone that generates waste and consumes energy. This location means the Centre can optimise the transportation of waste and develop virtuous circular economy loops at local and regional level.



HAGANIS is always looking for new types of recovery to protect the environment and for the practical development of a circular economy, including for **steam, slag, paper, packaging, wood and sewage sludge**.

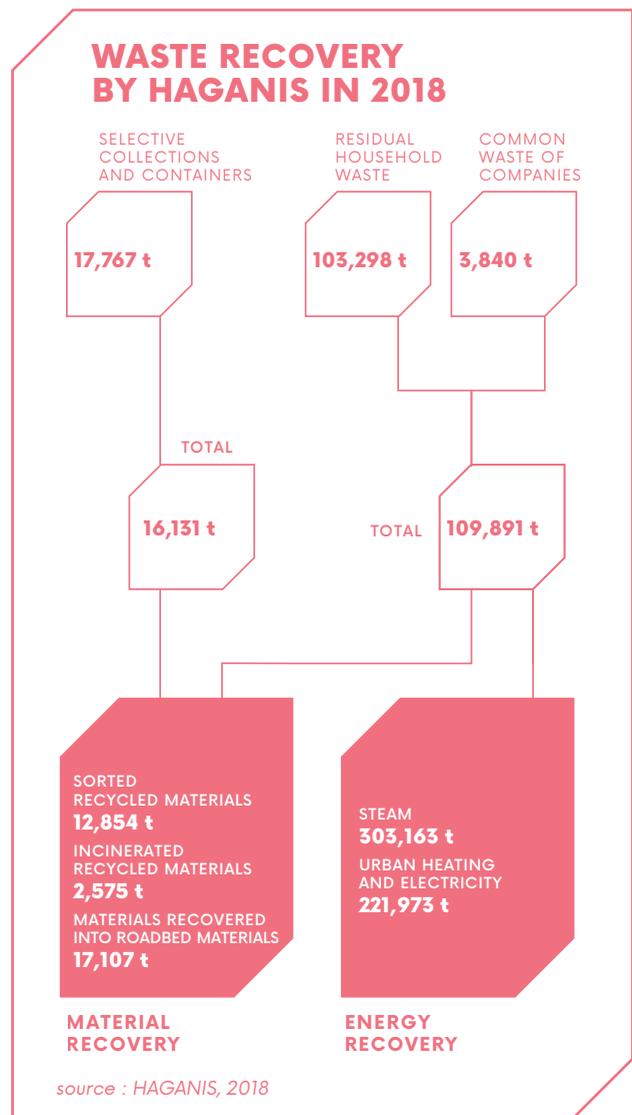
3,006 tons of wood were delivered to UEM in 2018 to supply its biomass power station. Furniture wood undergoes resource recovery by companies manufacturing compressed wood panels or for energy recovery.

In 2018, HAGANIS developed the **resource recovery of inert waste from refuse centres and waste disposal centres for businesses**. With almost **15,000 tonnes a year**, this waste is now recovered for use as aggregate in public works. In 2019, Haganis is devising ways to recover recycled sand sweepings for use in road works.

SANITATION AND ENERGY: THE OTHER TWO AREAS TO BE RECOVERED

Metz Métropole and HAGANIS **recover sewage sludge derived from various stages of wastewater treatment at 100%** to be used in muckspreading, composting and energy recovery, thereby avoiding the need for it to be buried as landfill.

In addition, with the dual goals of waste recovery and energy performance, HAGANIS recovers the heat from HV Turbo turbines (used for ventilating biological basins) to supply heating to its workshop, store and garage.







PARTICIPATION FROM WORDS TO ACTIONS

Urban ecology is the source of an inexhaustible supply of proposals, discussions and debates in the civic participation bodies of Metz and the metropolis – to the extent that Metz is the first French city to encourage a participative eco-citizen budget.

Residents voiced their opinions in great numbers regarding the drawing up of the 2017-2030 regional sustainable and solidarity project for the city of Metz. Following three debate-cafes and a written consultation, 300 proposals were collected, which were fed into the scheme's action plan, which is now being led by the city of Metz, its partners and residents. In the following year, the regional project for the new Metropolis received contributions from 200 partners and residents.

WITH THE PROPOSALS ARE OVER, RESIDENTS GET DOWN TO THINGS!

Several neighbourhood committees have designed and implemented projects for rehabilitating and developing pedestrian paths that cross their neighbourhood with a dual objective: functional – to ensure the safety of pedestrian traffic, especially for children on their way to school; and promotional – to introduce the neighbourhood's natural heritage. For example, the neighbourhood committee has made the area around the Vallières brook accessible; created a riverbank walkway and footbridge; installed street furniture; and

THE METZ MÉTROPOLE SUSTAINABLE DEVELOPMENT COMMITTEE

In 2009, Metz Métropole set up a Sustainable Development Committee consisting of 80 volunteers from various backgrounds. CODEV's mission is to provide ideas to the elected officials by producing opinions or reports on land-use planning and services to residents. Its actions are based on long-term goals in, for reference, the three key areas of sustainable development: the economy, society and the environment.

CODEV's work has a real impact on local life, with (for example) the creation of a delegation of officials responsible for peri-urban agriculture; the creation of the Arteo minibus line on the LE MET 'network; the revision of the Local Housing Programme; the introduction of a charter for citizen participation; and the development of the metropolitan project.

led discussions about signage adapted to suit the neighbourhood's natural environment. It has also published a range of communication media: a brochure on guided tours, neighbourhood parties and sporty walks.

Some residents have brought the major international movements devoted to ecological transition to Metz. Nine Incredible Edible Gardens have been set up by student or neighbourhood associations across different districts, on the



FRANCE'S FIRST ECO-CITIZEN PARTICIPATORY BUDGET



Metz has developed its sixth participatory budget in 2019 so that it is now **the first eco-citizen participatory budget in the country. It received 707 proposals from residents, almost double the previous edition!** Sustainable development is a criterion for selecting residents' proposals, as are the criteria for technical, financial and administrative feasibility. In view of these criteria, the selection made by the services and then by the residents themselves will allocate an overall budget of 500,000 Euros.

university campus, in the city centre and in various wards.

Other residents have worked on novel activities such as the Epluchures et Bicyclettes project by the MOTRIS collective, which uses bio-waste from Metz's restaurants for composting. Yet more residents have taken a stake in the **Borny farm community-based cooperative**, where they are devoting their time to developing the premises of this organic city farm.

Composting outside a block of flats or at neighbourhood level is based on the commitment of naturalist and neighbourhood associations, with the support of Metz Métropole.

FUTURE GENERATIONS IN ACTION!

Future generations in Metz are having their say, and are already developing their own projects thanks to **the Children's Municipal Council, which has just celebrated its 10th anniversary.** From the outset, the council has always acted to make the city greener and more united.

The council's 55 young members, aged 9 and 10, have invested all their energy and boundless imagination in educating the people of Metz about the city's environmental riches and environmental preservation. They have designed **an eco-board game for school children, Les P'tits Eco-Lorrains; a water walking tour that you can follow using the Histoires de Metz tourist app; and developed a special circuit, "Ralentir, observer, rêver au parc de la Cavalerie", to encourage people to stop and observe nature in a little-known local park in the city centre.**

Finally, on March 12, 2019, the Minister François de Rugy presented the Children's Municipal Council with an eco-action award, the **Trophée Éco Actions des Ecomaires**, for a model they made – **The Ideal, Green, Sustainable and United City** – in partnership with a local artist, Sarah Poulain, at a series of workshops at the Centre Pompidou-Metz.

#Green Metz

METZ
CAPITAL
OF URBAN
ECOLOGY