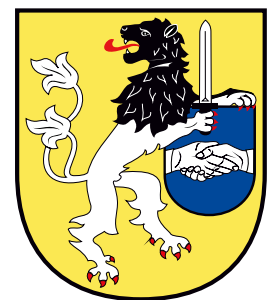




Voluntary Local Review of the Municipality of Bad Köstritz 2023

Implementing the 2030 Agenda and the
Sustainable Development Goals at the local level



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Foreword

The global objective of the 2030 Agenda for Sustainable Development is to shape worldwide development in an environmentally, economically and socially sustainable manner and thus give future generations the prospect of a decent life.

Famed for its dahlias, the Municipality of Bad Köstritz has worked with civil society, associations and clubs, schools, businesses and politicians to elaborate a programme of action to implement the Sustainable Development Strategy for the 2030 Agenda. This programme now serves as a basis for planning and rolling out a series of measures and projects. It therefore gives us, as a small municipality in the German federal state of Thuringia, great pleasure to be able report on this programme through this Voluntary Local Review (VLR). Sustainability is a topic that affects all municipalities, no matter how small they are. Through their engagement, cities and municipalities take on a role model function and can have a direct impact on citizens' lives.

As a certified “Municipality for Global Sustainability” whose key areas of activity include education for sustainable development, tourism, demographics, environmental protection, climate action and renewable energy, the Municipality of Bad Köstritz wishes to embrace its global responsibility. At the same time, our municipality is helping to preserve a liveable and enjoyable environment for children and young people and to safeguard its natural resources. Looking ahead, this is the only way to ensure that future generations will be able to meet their basic needs.

We are presently engaged in some ambitious development projects. These include education activities to establish Fairtrade, fair public procurement in our municipality, and the sustainability partnership with the Municipality of Huamantla in the dahlia’s country of origin, Mexico.

With our Voluntary Local Review (VLR) on implementation of the

2030 Agenda, we are showing other municipalities how to successfully implement a programme of action under the Sustainable Development Strategy. We are pleased to be reporting for the first time to the UN High Level Policy Forum (HLPF) and, together with other substantially larger cities and municipalities, to be presenting qualitative and quantitative cross-sectional data on the implementation status of the 2030 Agenda in Germany. Moreover, the VLR not only documents and takes stock of the local status quo. It also constitutes an important document for the citizens of our municipality. This is because it creates transparency, and at the same time provides the conceptual basis for further objectives.

Given the growing awareness of the importance of the local level for implementing the 2030 Agenda, we would like to encourage all municipalities to embrace this review mechanism.

I would like to take this opportunity to thank all my colleagues in the municipal offices and all civil society actors for their dedicated support when planning and implementing our ambitious sustainability goals. Together, we are enabling a “Municipality for Global Sustainability” here in Thuringia.



Oliver Voigt
Mayor of the Municipality
of Bad Köstritz

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01

1 Introduction

1.1	Voluntary Local Reviews in the context of the 2030 Agenda	11
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Photo 1: Dahlias in front of Köstritzer Palais (town hall) © Stadt Bad Köstritz

1.1 Voluntary Local Reviews in the context of the 2030 Agenda

In 2015, the UN member states adopted the 2030 Agenda with its 17 Sustainable Development Goals (SDGs). In the 2030 Agenda, the global community agreed on a framework for a worldwide transition to sustainable development. The 17 SDGs (see Fig. 1) are translated into greater detail in 169 targets, covering the environmental, social and economic aspects of sustainability. The SDGs are universally applicable, addressing all UN member states in the Global South as in the North, and aim to bring about radical changes at political and societal levels. The outcomes of the Global Sustainable Development Report 2019 (to be updated in September 2023) make it clear that rigorous action will be needed during the ongoing UN Decade of Action 2020-2030 if the SDGs are to be achieved by 2030. As a universal framework of reference, the 2030 Agenda guides actions within Germany too, at federal, state and local levels.

SUSTAINABLE DEVELOPMENT GOALS



Figure 2: The 17 Sustainable Development Goals

To render visible the progress made towards achieving the SDGs, the 2030 Agenda calls for regular reviews.¹ At national level this takes the form of Voluntary National Reviews (VNR). The VNRs are presented annually at the UN High-Level Political Forum, the central platform for the follow-up and review of the 2030 Agenda at the global level. Every year the Forum focuses on different SDGs. In 2023, for instance, the focus is on SDGs 6, 7, 9, 11 and 17. In 2016 and 2021 Germany presented a Voluntary National Review to the High-Level Political Forum (HLPF).

Municipalities have a particularly vital part to play in the successful implementation of the 2030 Agenda, since this is the level at which the stage will be set in the most crucial way.² All 17 SDGs have targets that directly relate to local level responsibilities. Pertinent literature often points to the fact that at least

65 per cent of the 169 targets will only be achieved if municipalities are consistently involved in implementation and monitoring.³ Accordingly, the 2030 Agenda underlines the key role to be played by local authorities and the importance of cooperation between different levels of action and actors.⁴ Local actors are called on to identify and implement action required at local level based on the global goals. This is known as localising the Sustainable Development Goals. Three main areas of responsibility may be addressed: “at local level for local level” (measures that impact the municipality itself), “at local level for the world” (local measures with a global impact), and “in and through other countries” (measures that are realised worldwide and in conjunction with other municipalities).⁵ Municipalities thus play a pivotal role as trailblazers for change and as the level closest to citizens. Against this backdrop, over 200 German

1 Reporting takes place within the framework of the 2030 Agenda review mechanism (“conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country-led and country-driven”; UN, 2015 - paragraph 79). It is also indicated that the local level should be involved (“follow up and review at the regional and subregional levels can, as appropriate, provide useful opportunities for peer learning, including through voluntary reviews”; UN, 2015 - paragraph 80). By 2030 all UN member states are to have published a minimum of two national reports. Official requirements apply to the structure and content of reviews at nation state level.

2 See UCLG, 2021 and Gustafsson & Ivner, 2018.

3 See OECD, 2020.

4 UN, 2015 - Paragraph 45.

5 See also the similar breakdown of measures in the German Sustainable Development Strategy.

municipalities have already signed the specimen resolution “The 2030 Agenda for Sustainable Development: Building Sustainability at the Local Level” (Association of German Cities, German Association of the Council of European Municipalities and Regions (CEMR)).

As awareness grows of the importance of the local level for achieving the SDGs, an increasing number of municipalities around the world are reporting on their own individual contributions. In contrast to national reviews, local reviews of SDG implementation have no official status and thus no UN mandate with concomitant reporting requirements. Since 2018 (when New York and the three Japanese cities of Shimokawa, Toyama and Kitakyushu were the first to report on their progress), more and more municipalities have taken the initiative and reported voluntarily on the status of their local-level implementation of the SDGs. The reports are thus known as Voluntary Local Reviews, or VLRs. Local reporting has now become an extremely dynamic global movement, with several new VLRs published every year.⁶ The first German municipalities to produce a VLR were Mannheim in 2019 and Bonn in 2020. In 2022, Dortmund, Düsseldorf, Hannover and Kiel followed suit. VLRs offer a huge potential to feed practical experience at local level into national and regional reporting, thus enhancing overall coordination, accountability and transparency. The dovetailing of the different levels (known as vertical integration) is pivotal. In this regard, the relevance of VLRs transcends mere monitoring, since VLRs accelerate localisation of the SDGs and the transition to greater sustainability in the spirit of bottom-up processes, while also supporting reciprocal learning.⁷ This is also reflected in the growing trend to firmly integrate the local level in the UN High-Level Political Forum (e.g. as part of the Local and Regional Governments Forum) and involve local actors in national reviews.⁸

Given that there have not so far been any uniform standards for the production of VLRs, it is not surprising that the reviews published around the world vary widely in terms of structure and content. A growing number of publications do, however, offer guidance (including for instance UCLG & UN-Habitat Guidelines for Voluntary Local Reviews, the European Handbook for SDG Voluntary Local Reviews, the UNDESA Global Guiding Elements for Voluntary Local Reviews of SDG implementation and, in German, Engagement Global’s Handreichung zu VLRs).⁹ This VLR has taken account of the international guidelines in terms of the methodology used and the structure of the review.

6 For an up-to-date list of VLRs published to date see the Voluntary Local Review website of the UN Department of Economic and Social Affairs (UN DESA). Comparative analyses can be found in UN-Habitat & UCLG, 2021.

7 See also Deininger et al., 2019; Pipa & Bouchet, 2020 and Koch et al., 2019.

8 See German Institute of Urban Affairs & Bertelsmann Stiftung, 2021.

9 Cf. UCLG & UN-Habitat, 2020; Siragusa et al., 2020; UNDESA, 2020; Engagement Global, 2022; see also IGES, 2021 and UNESCAP, 2020.

1.2 Context, methodology and structure of this report

This Voluntary Local Review reflects the status quo in 2023 in terms of sustainable local development and provides a round-up of the progress made towards achieving the SDGs. The VLR has been produced within the framework of a project of Engagement Global's Service Agency Communities in One World on behalf of the Federal Ministry for Economic Cooperation and Development (Voluntary Local Reviews for Globally Sustainable Municipalities - Local-level support and advice on producing VLRs). In Germany, the Service Agency is the central contact point for local development policy. It enables municipalities to get involved in action for global sustainability and a more equitable world, as set out in the United Nations 2030 Agenda, with actions both at local level and in the Global South. During the project term from July 2022 to October 2023, six German municipalities (the City of Freiburg, the District of Fürstfeldbruck, the Free and Hanseatic City of Hamburg, the City of Cologne, the Municipality of Bad Köstritz and the Municipality of Rottenburg am Neckar) were given support to help them draw up individual VLRs in German and in English. The municipalities involved could report on either all 17 SDGs or on the five focal SDGs to be addressed by the 2023 UN High-Level Political Forum (SDGs 6, 7, 9, 11 and 17). The VLRs were published to coincide with the HLPF in summer 2023. Alongside the ongoing support for the participating municipalities, inter-municipal exchange was important within the scope of the project, to encourage municipalities to learn from one another. Overall this has helped make German VLRs stronger and more uniform.

The individual municipalities put in place working groups to elaborate the VLRs. They conducted an extensive baseline survey to gather the information needed for the report. The process involved firstly forming a project team within the administration that brought together people from all relevant local

Photo 3: Signing of the contract for cooperation on projects of the Agenda 2030 between the mayors of the cities of Huamantla, Juan Salvador Santos Cedillo (left) and Bad Köstritz, Oliver Voigt © Stadt Bad Köstritz



divisions (e.g. planning, environment, transport, social affairs, international affairs, public health and economic development). The project team was managed by a coordinator or coordinators (one or two individuals), who were responsible for organising the process at local level. With the help of information provided by the members of the project team, a systematic baseline survey was conducted, covering both qualitative and quantitative elements. The qualitative analysis looked at all core activities of the municipality that help achieve sustainable development. This included guiding strategies and concepts, measures and activities, projects, permanent responsibilities, programmes, political decisions, specific goals, cooperation arrangements and networks, as well as organisational structures. Additionally, key achievements and outcomes in recent years were identified in the various thematic areas. To complement this, general information was gathered on overarching aspects of sustainability. The quantitative analysis evaluated firstly a fixed set of indicators (SDG indicators for municipalities) and then supplementary municipality-specific indicators. The set of fixed indicators was developed by the Bertelsmann Stiftung and other institutions.¹⁰ The project aims to identify indicators capable of illustrating the implementation of the SDGs at local level in Germany. An online portal (the SDG Portal) provides data available from a number of centralised sources for all German municipalities with a population of at least 5,000. The six municipalities participating in the Service Agency project were able to supplement these indicators with their own indicators, particularly in areas where little data was available, enabling them to take account of the specific local context. These data were then provided by the municipalities themselves. Within the framework of the baseline survey, various source materials (Excel tables broken down by SDG and overarching questionnaires) were combined in the project. A draft report was drawn up on this basis, and discussed at various project team workshops and in local consultation processes. The draft was expanded accordingly and subsequently

finalised. Overall, this process surmounted traditional barriers within administrations, and allowed information to be compiled across departments and units. Given the thematic breadth and interconnected nature of sustainability issues, this horizontal integration was crucially important.

This VLR is broken down into two main sections. The first of these provides a general introduction to sustainability processes on the ground. Alongside a thumbnail sketch and a presentation of the main milestones in realising sustainability, this section includes an explanation of how sustainability is being mainstreamed at strategic and organisational level. The second part presents specific progress made towards achieving the individual SDGs in recent years. This includes both qualitative and quantitative elements, in line with the baseline survey. Firstly, all core activities undertaken to implement the SDGs are presented, and the individual activities indicated in the text. The indicators selected are then outlined (with illustrations for the key indicators). The indicators used map progress over the last decade, illustrating longer-term developments. At the start of each SDG section, all activities and indicators are summarised concisely. Every SDG section also contains an introductory text, which presents the SDG and its specific relevance for German municipalities.

¹⁰ See Bertelsmann Stiftung et al., 2022.





02

2 Bad Köstritz in the Context of Sustainable Development

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2.2	Sustainability in the municipality of Bad Köstritz - an introduction	19
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Photo 4: Dahlia field of the horticultural company Paul Panzer Bad Köstritz © Stadt Bad Köstritz

2.1 Brief profile of the municipality of bad köstritz

The Municipality of Bad Köstritz is a small municipality in East Thuringia with about 4,000 inhabitants. It is located in the administrative district of Greiz between the major cities of Gera and Jena in the valley of the *Weißer Elster* (White Magpie River). The municipality is known for its more than 200-year-old traditions of dahlia growing and beer-making. The municipality is also referred to as the town of "Bs", as in *Bad* (spa), *Bier* (beer), *Blumen*, (flowers) and *Barockmusik* (Baroque music), but also *Bauten* (buildings) and *Bewegung* (movement).

There are a great many things worth exploring in Bad Köstritz. Some of them have been around for centuries and have been extensively restored. This includes the stately home Köstritz Palais, the Golden Lion Hotel, the neo-classical temple in Köstritz Park, the *Haus des Gastes* (Guests' House) with the small "GUCKE" gallery and numerous *Gründerzeit* buildings. Bad Köstritz also has some old, lovingly maintained



half-timbered houses decorated with flowers, not to mention its listed local green spaces. The municipal landscape is also shaped by new, prestigious buildings, such as the town's retirement homes, its innovative industrial landscape with the Köstritz black beer brewery, the CWK chemical factory, the *Elsteraue* and *Heinrichshall* industrial estates as well as several residential parks. Beyond the rose garden - *Rosarium* - and other gardens and parks lies the athletics stadium, which was built to international standards. In terms of sports and recreation, the municipality boasts a swimming and leisure pool that has been completely refurbished to meet the demands of a modern-day public aquatics centre.

Traditional festivities, such as the Dahlia Festival or the Köstritzer Schütz Days (in honour of the composer Heinrich Schütz), attract thousands of guests from far and wide each year. Finally, Köstritz offers its residents and guests a varied and active range of clubs and associations which make this municipality a really nice place to live and call home.

Photo 5: Secretary Annekatrin Gottlieb operates wheel of fortune with the 17 Agenda 2030 goals © Stadt Bad Köstritz



2.2 Sustainability in the municipality of Bad Köstritz - an introduction

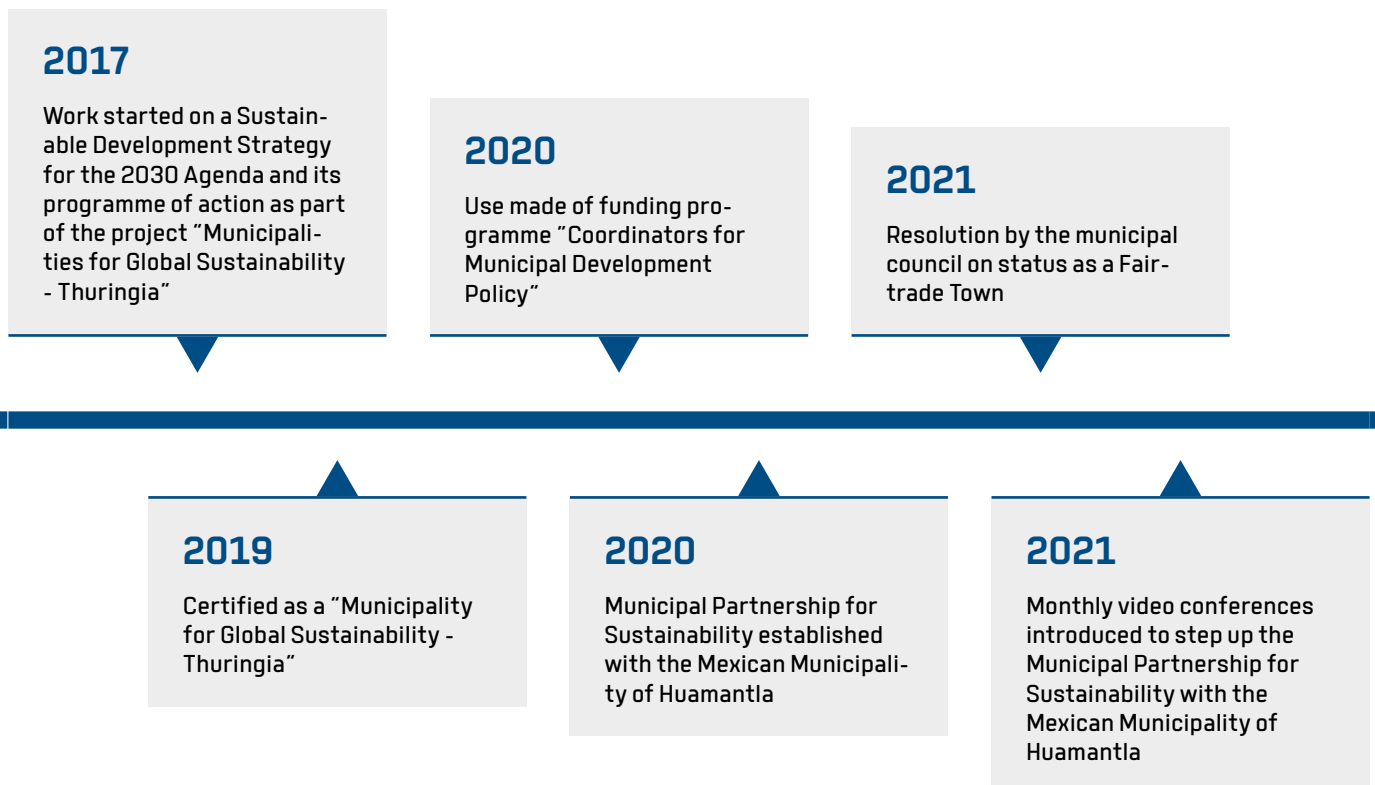
The specific challenges facing our municipality in terms of sustainable development concern its demographics and matters of education, the climate, environment and energy. In the programme of action for Bad Köstritz-Crossen's Sustainable Development Strategy, which was elaborated as part of the "Municipalities for Global Sustainability" project (see below), these topics form the main thrust of activity in the context of global responsibility. Close collaboration between administrators, councillors, business and civil society is a key feature of the approach used to implement programme measures. By establishing the financially supported position of Coordinator for Municipal Development Policy, the Municipality of Bad Köstritz has laid the foundation for further expanding the network already established as part of the Municipalities for Global Sustainability process. This will enable it to push ahead with key projects from the Sustainable Development Strategy. As part of this process, interactions between the offices of the Municipality of Bad Köstritz and external actors will be organised by the coordinator.

In the field of local sustainable development, the core tasks aim to localise achievement of the Sustainable Development Goals (SDGs) specified in the 2030 Agenda. This makes for many different sustainability projects in the Municipality of Bad Köstritz. The full range of PR work and communication with our citizens is designed to build a foundation that fosters acceptance, understanding and engagement by civil society in this challenging process.

A number of key sustainability milestones have been achieved in recent years. For example, trade and public procurement in line with social, fair and sustainable principles has increasingly gained traction in Bad Köstritz, which is hoping to achieve certification as a Fairtrade Town in 2023. The citizens of Bad



Köstritz are also pleased and enthusiastic about the sustainability partnership with the Mexican Municipality of Huamantla. This municipal partnership has grown from existing civil society contacts between Bad Köstritz's Dahlia Centre and the Mexican Dahlia Society. With the dahlia as the connecting element, the two municipalities have been able to establish lively communication as equal partners over the past three years. Regular video conferences and reciprocal in-person visits have enabled the two sides to discuss, plan and implement many joint projects. An official agreement for this partnership has already been signed. Its purpose: close cooperation on the sustainability topics in the 2030 Agenda.



2.3 Strategic and organisational mainstreaming of sustainability

For many years now, but particularly since taking part in the project of the same name, the Municipality of Bad Köstritz has strived to be a "Municipality for Global Sustainability". The Municipality of Bad Köstritz, together with its neighbouring municipality of Crossen an der Elster and eight other Thuringian pilot municipalities, took part in the first round of the **project "Municipalities for Global Sustainability - Thuringia"** between October 2016 and the summer of 2019. Accordingly, in 2019, Bad Köstritz was awarded the title of a "Municipality for Global Sustainability".

2021

COVID-19 Solidarity Package used to procure 40 oxygen concentrators for Huamantla General Hospital

2022

Municipal Partnership for Sustainability with the Mexican Municipality of Huamantla further intensified through mutual visits

2021

Municipality adopted fair, social and sustainable public procurement practices

2023

Application made to a small project fund for the construction of a greenhouse in Huamantla to help train workers and fight joblessness.

In the project “Municipalities for Global Sustainability - Thuringia”, municipalities develop local sustainable development strategies in the context of the 2030 Agenda. The project is being implemented by Engagement Global gGmbH’s Service Agency Communities in One World in cooperation with the association *Zukunftsfähiges Thüringen e.V.* (Future-proof Thuringia) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The sustainable development strategies are formulated in a two-year participatory process. This involves conducting a baseline survey, and then identifying objectives, measures and indicators that will subsequently allow for regular review, reporting and fine-tuning. The process produces a strategic management tool that enables the joint development of solutions within the municipality. It also mobilises resources and fosters cross-cutting thinking and action, especially among administrators and councillors. Furthermore, the tool includes specific references to the 17 Sustainable Development Goals (SDGs), as well as to Thuringia’s existing sustainable development strategy and Germany’s national Sustainable Development Strategy. Along the way, any procedures, strategies and experiences that are already in place in the municipalities concerned are taken on board, and a strong focus is placed on managing and implementing sustainability within the local administration. The project thus makes a tangible contribution towards implementing the 2030 Agenda at the local level. At the same time, it fosters sustainable local development that combines social, economic and environmental objectives, champions development activities and promotes cross-cutting thinking and action. The local level is thus made aware of the international impact of its actions and of the importance of embracing its global responsibility.

The Municipality of Bad Köstritz has harnessed the opportunities and challenges afforded by this project to align its own concepts of, and objectives for, sustainable development with the 2030 Agenda and to elaborate local implementation strategies. The resultant **Programme of Action for Bad Köstritz-Crossen’s Local Sustainable Development Strategy** in-

cludes guiding visions, strategic and operational objectives, and measures in various thematic fields relating to sustainable local development. This programme of action focuses on the topics of education, demographics, global responsibility and One World, natural resources, the environment, and climate action and energy (see details below). Ultimately, by implementing its Sustainable Development Strategy, the Municipality of Bad Köstritz wishes to embrace its global responsibility by helping to a) ensure a liveable and enjoyable environment for future generations, and b) safeguard the resources that are vital for meeting future needs. In this way, it is serving as a role model for its citizens and institutions.

A **core in-house team** comprising representatives of various offices (Mayor, Coordinator for Municipal Development Policy, building authorities, cultural affairs department) was founded to elaborate the programme of action. This core team formed part of a **steering group** that also comprised representatives from civil society (such as associations and schools), business and politics. The programme of action was agreed on by the municipal council in May 2019, and has since served as key frame of reference for sustainability issues. Several objectives and measures have been implemented in recent years and more are to be rolled out gradually in the years ahead. Successful sustainability measures are reported on regularly. The programme of action can be adjusted and updated in line with current circumstances at any time.

The following bodies are especially important for realising sustainability in the Municipality of Bad Köstritz: the Mayor, the councillors, the core team and steering group for Municipalities for Global Sustainability, the Fairtrade Town steering group and the network of actors for Municipal Partnerships for Sustainability (for further details, see the section on SDG 17). At the administrative level, the Coordinator for Municipal Development Policy and the core team for Municipalities for Global Sustainability are responsible for implementing sustainability activities (sometimes other staff get involved on a temporary basis). By establishing the position of Coordinator

for Municipal Development Policy, the Municipality of Bad Köstritz has created a central point of leverage for realising the Sustainable Development Strategy. The “Coordinators for Municipal Development Policy” programme delivered by the Service Agency Communities in One World is funded using resources provided by the German Federal Ministry for Economic Cooperation and Development (BMZ). Financial support has been awarded since 2016 for human resources required for municipal engagement for development cooperation. The Coordinator for Municipal Development Policy in our municipality coordinates cooperation between the relevant actors when implementing sustainability activities. In keeping with the principle of “Joint Action for Sustainability”, local citizens,

along with local firms, associations and institutions, are all involved.

Below is an introduction to the thematic topics of the programme of action with their respective visions and strategic objectives. Pertinent operational objectives and measures are each dealt with in more depth in the corresponding sections on SDGs 6, 7, 9, 11 and 17 respectively.

Photo 6: The Voluntary Local Review Team with Philine Week-Meier (Building Department), Anne-Cathrin Ritschel (Head of the Cultural Department), Andreas Hartmann (Coordinator for Communal Development Policy), Oliver Voigt (Mayor of Bad Köstritz), Manuela Boigs (Head of the Building Department) f.l. © Stadt Bad Köstritz



EDUCATION

- ▶ **VISION:** Bad Köstritz and Crossen are sustainable, innovative educational powerhouses for all generations. With their needs-oriented services, they ensure high quality education that is locally rooted, fair and equal and enables everyone to take part. With their future-oriented education services, including education for sustainable development, Bad Köstritz and Crossen are moving forward in a manner that is both child-friendly and amenable to families.
- ▶ **STRATEGIC OBJECTIVE 1:** In 2030, Bad Köstritz and Crossen have a local school centre in a sustainable and viable location. "Joint learning" makes for a high level of schooling. In 2030, every type of school-leaving qualification can be acquired in Bad Köstritz and Crossen, thus enabling young people to make a successful start to their professional career.
- ▶ **STRATEGIC OBJECTIVE 2:** In 2030, the topic of education for sustainable development has been mainstreamed by school and non-school education providers alike.
- ▶ **STRATEGIC OBJECTIVE 3:** By 2030, schools have adopted a stronger practical orientation. Schools offer a higher number of internships. This helps secure skilled workers for the region.

DEMOGRAPHICS

- ▶ **VISION:** Bad Köstritz and Crossen form a strong inter-functional Grundzentrum (basic centre: lowest rank in the formal German hierarchy of spatial planning) that offers good working, housing and living conditions. Bad Köstritz and Crossen pro-actively shape demographic change by providing services for all ages and social structures.
- ▶ **STRATEGIC OBJECTIVE 1:** Bad Köstritz and Crossen are strengthened as an inter-functional Grundzentrum and provide sufficient basic public services of general interest (SGIs). By the year 2030, an age-appropriate infrastructure is in place in Bad Köstritz und Crossen. There is a differentiated supply of housing for all generations.
- ▶ **STRATEGIC OBJECTIVE 2:** In Bad Köstritz and Crossen there is inter-generational cooperation and support. In 2030, there are vibrant networks that represent and pro-actively shape the interests of the people who live there today but also of the generations to come. Schools and businesses also make an active contribution.
- ▶ **STRATEGIC OBJECTIVE 3:** Bad Köstritz and Crossen are essentially barrier-free by 2030 and enable older people to take part in social life too. This also applies to mobility.
- ▶ **STRATEGISCHES ZIEL 4:** Workplace-oriented migration makes for a healthy ratio of young and old. An attractive housing environment is on hand. Municipalities and businesses cooperate with each other on a pro-active basis.

GLOBAL RESPONSIBILITY AND ONE WORLD

- ▶ **VISION:** On the road to becoming Municipalities for Global Sustainability, Bad Köstritz and Crossen work to raise people's awareness about the need to establish new forms of global cooperation and international partnerships. Citizens demonstrate respect and tolerance for all people and are committed to peaceful coexistence and fairness for all people in our One World.

- ▶ **STRATEGIC OBJECTIVE 1:** In 2030, the partnership with a municipality in Mexico is firmly established and pro-actively supported. This activates and perpetuates exchanges and self-reflection in the sense of lifelong learning.

- ▶ **STRATEGIC OBJECTIVE 2:** Together with the Dahlia Centre, Bad Köstritz undertakes to conserve the diversity of natural dahlia species as well as historical cultivars. Through to the year 2030, the Dahlia Centre Bad Köstritz intensifies its cooperation with the Mexican Dahlia Society. The municipality pro-actively supports the Dahlia Centre with the conservation of biological diversity and in projects on site.

- ▶ **STRATEGIC OBJECTIVE 3:** In 2030, municipal procurement and commissioning is conducted in line with sustainable and environmental criteria.

- ▶ **STRATEGIC OBJECTIVE 4:** Together with numerous actors, the municipality promotes the consumption of products that are, for the most part fair, regional and environmentally friendly.



NATURAL RESOURCES AND THE ENVIRONMENT

- ▶ **VISION:** On the road to becoming Municipalities for Global Sustainability, the Municipalities of Bad Köstritz and Crossen focus on safeguarding what is worth preserving, on leveraging what they already have and minimising external intervention. Bad Köstritz and Crossen advocate the conservation of biological diversity, the further development of existing green corridors and comprehensive flood protection. Land take in Bad Köstritz and Crossen is kept to a minimum. Adaptation to the impacts of climate change is a central concern, and one that is addressed by a sustainably designed and marketed tourist infrastructure.
- ▶ **STRATEGIC OBJECTIVE 1:** To adapt to the impacts of climate change, flood protection in the year 2030 is achieved through the interplay of municipal action and land development.
- ▶ **STRATEGIC OBJECTIVE 2:** In 2023 municipal green spaces have a semi-natural design; biodiversity-friendly strips of flowers have been planted and near-natural biotopes preserved.
- ▶ **STRATEGIC OBJECTIVE 3:** Bad Köstritz and Crossen have established sustainable land-use management. To this end, gaps between buildings in Bad Köstritz are added to the cadastral register for infill development that is already on hand for Crossen.
- ▶ **STRATEGIC OBJECTIVE 4:** In 2030, Bad Köstritz and Crossen share a pooled space for effective compensation and replacement measures.

CLIMATE ACTION AND ENERGY

- ▶ **VISION:** As municipalities, Bad Köstritz and Crossen an der Elster fulfil a model role with respect to climate action. The municipalities motivate their citizens to consciously adopt a sustainable way of living and working. By saving and making efficient use of energy as well as substituting fossil energy carriers, they thus contribute to climate action and help stem the negative impacts of climate change. The Municipalities of Bad Köstritz and Crossen commit to the climate goals of the Federal State of Thuringia. By the year 2030, per-capita output of climate-noxious emissions has already dropped substantially.

- ▶ **STRATEGIC OBJECTIVE 1:** The municipalities mainly use natural and recycled building materials and plan and build highly efficient new buildings and refurbishments. They develop their efficiency and savings potential in all areas of energy use.

- ▶ **STRATEGIC OBJECTIVE 2:** Electricity generated locally from renewables accounts on balance for at least 100 per cent of consumption in 2030. Heating energy is also mostly generated from local sources.

- ▶ **STRATEGIC OBJECTIVE 3:** By 2030, regional value creation in the energy sector has increased and energy value cycles within the region have been designed and consolidated.

- ▶ **STRATEGIC OBJECTIVE 4:** Thanks to pro-active information and motivation and the use of participatory processes, local citizens are involved in and help shape municipal policies on energy and climate action. Decision-makers and staff in the municipal administration and also in businesses have the technical capacity to successfully realise the goals of energy savings, substitution and value creation in the region.



2.4 Public participation in sustainability

Public participation by various societal groups is of central importance for realising sustainable development, especially at local level. Participation is thus an aspect of sustainability that plays a special role for the Municipality of Bad Köstritz. In this respect, reference is made here to the collaborative participation processes under "Municipalities for Global Sustainability" (see above) and the Fairtrade Town campaign (see section on SDG 17), as they involve many different actors.

The Municipality of Bad Köstritz is also very actively engaged in the PR sector, the aim being to inform and raise awareness amongst the local population about the different topics involved in sustainable development. Activities relating to sustainability topics are thus compiled and presented on the municipality's website under *Aktuelles* (Latest news) and under *Global&Nachhaltig* (Global&Sustainable). Furthermore, extensive PR work is conducted by means of the *Amtsblatt* (official gazette), the regional daily newspaper, online editorials, Facebook and through radio and television broadcasts (*Mitteldeutscher Rundfunk*/Central German Broadcasting). Other services include interaction on the website, public events and talks, presentations and information stands at municipal festivities, and having interested citizens participate in networking activities.

Photo 7: Demeter temple in the Köstritzer Park. © Stadt Bad Köstritz





Photo 8: Reigning Dahlia Queen Michaela Grace I. © Stadt Bad Köstritz

Photo 9: Dahlia arch in Köstritzer Park © Stadt Bad Köstritz





03

3 Implementation of the Sustainable Development Goals (SDGs) in the Municipality of Bad Köstritz

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3.1 SDG 6 - Clean Water and Sanitation

3.1.1 SDG 6 - Introduction and relevance for German municipalities

SDG 6 is designed to ensure availability and sustainable management of water and sanitation for all. It concerns access to drinking water and sanitation/hygiene for all. It also includes wastewater management, water protection, long-term water availability, efficient water use and the promotion of integrated water resources management. Groundwater is the major drinking water resource in Germany. However, water plays an important role not only for human supply, but also for instance in agricultural production and the preservation of ecosystems. To ensure the maintenance of natural and near-natural water cycles and water supply, water resources must be protected against pollution and overexploitation.

The key focus of implementing SDG 6 in Germany is therefore on improving water quality. However, the effects of climate change mean that seasonal/regional water scarcity will increase in the future. This also brings the responsible use of water resources into focus.¹¹ For German municipalities, the following themes are therefore especially relevant at the local level (please also compare these with the targets for SDG 6 in the annex):

- Ensuring water quality and avoiding water scarcity
- Protecting aquatic ecosystems
- Guaranteeing municipal sanitation and wastewater disposal.

¹¹ See Germany's Voluntary National Review to the High-Level Political Forum 2021 and the German Sustainable Development Strategy 2021.



3.1.2 Overview of qualitative aspects and indicators

Qualitative aspects:

- Introduction - Overarching goals in the water sector
- Water supply and sustainable water management in the Municipality of Bad Köstritz
- Surface water
- New public toilets

3.1.3 Contributions of the Municipality of Bad Köstritz to the SDG

Introduction - Overarching goals in the water sector

Water is the source of all life. Besides its general environmental importance, water serves various other purposes, above all as drinking water and also service water. Therefore, protecting groundwater and bodies of water as key components of the ecosystem is vital for people's health, for preserving the natural basis on which their lives depend and as a determining factor for economic development. It is against this backdrop that access to clean drinking water is enshrined as a human right. The water sector - in the sense of water supply and sanitation - is thus considered a "critical infrastructure" in Germany.

In Germany, drinking water supply and sanitation are guaranteed public services of general interest (SGIs). However, climate change is now exerting greater pressure on water resources in Germany, too. Increasingly visible in Germany, the impacts of climate change are affecting the water balance to different extents from one region to the next. Heavy rains and flooding, heat waves and lasting drought are becoming more frequent and intensive. As in the past, there is still much need for improvement in the quality of water bodies and drinking water alike.

The **EU Water Framework Directive (WFD)** sets out rules to halt the deterioration of the status of EU water bodies (rivers, lakes, transitional and coastal waters) and achieve a good status for Europe's rivers, lakes and groundwater. The WFD is a Europe-wide attempt to restore all surface water and groundwater to a "good status" by 2027 at the latest. For surface water, this means a good ecological and chemical status; for groundwater a good chemical status and sufficient volume. According to the WFD, ecological status refers to the quality of the structure and functioning of surface water ecosystems. For sur-

face water, a good status is defined as compliance with minimum specifications for various biological and chemical parameters. Chemical status is defined as good if the threshold values for specific nutrients and harmful substances are met. With regard to a sufficient quantity of good quality water, it is necessary to maintain a balance between the withdrawal and recharge of groundwater. Overall, a good status for surface water and groundwater bodies thus leads at an overarching level to structures that are as near-natural as possible and to low levels of pollution.

In Germany, the EU Water Framework Directive (WFD) is anchored in the Water Resources Act (*Wasserhaushaltsgesetz, WHG*), in the Surface Waters Ordinance (*Oberflächengewässerverordnung, OGewV*) and Groundwater Ordinance (*Grundwasserverordnung, GrwV*). The WFD makes for source-to-estuary protection in water catchment areas. Germany has identified ten river basin districts as national management planning areas for WFD implementation. The core elements of water resources planning are the management plans and catalogues of measures that are drawn up for entire river basins or parts of them. The river basin management plans and catalogues of measures - currently 2022 - 2027 - are updated on a regular basis.

Germany's Voluntary National Review (VNR) to the HLPF 2021 (Report on the implementation of the 2030 Agenda for Sustainable Development) states that, in terms of their quality, all 9,800 bodies of surface water and a good third of the 1,200 groundwater bodies in Germany failed to achieve the "good status" category. A 2022 report by the German Federal Environment Agency (UBA) and Germany's Federal Environment Ministry (BMUV) on the status of water bodies (The Water Framework Directive - Water Bodies in Germany 2021, Progress and Challenges) conclusively corroborates this result. At present, only 9 per cent of all surface water bodies achieve a good ecological status and none of the surface water bodies achieves a good chemical status. In the case of groundwater, some 67 per cent of the water

Photo 10: Spring catchment Gleinabach with biotope and fire fighting pond in the district Gleina © Stadt Bad Köstritz



bodies achieve a good chemical status and 95 per cent are available in a sufficient quantity. Both in groundwater and surface water, nutrient and pollutant concentrations are detectable across the board - in particular phosphorous, nitrogen and mercury (only 1 per cent of surface water bodies and 53 per cent of groundwater bodies in Germany are currently considered unpolluted). The main reasons why most surface water bodies fail to achieve a good ecological status include overbuilding, straightening and transverse structures interrupting the free flow of watercourses. Against this backdrop, Germany is now planning to undertake some extensive measures over the years ahead. The measures planned for the current management period (2022-2027) provide for the restoration of surface water ecosystems, with a view to improving habitats for animals and plants; nutrient and other pollutant inputs are to be reduced too. The measures for groundwater bodies focus mostly on reducing pollution from the agriculture sector.

Given the current and future challenges facing water resources, the German Government adopted an additional specific **National Water Strategy** in 2023. Through this strategy the German Government aims to safeguard Germany's natural water resources, prevent water scarcity, avoid conflicting goals, tackle the rehabilitation of water infrastructure and improve the status of water bodies and water quality. The 78 measures in the programme of action, which will be implemented step-by-step through to 2050, are designed to ensure that water resources are handled more sustainably, thus creating the basis for modern water management.

Against this background, the Municipality of Bad Köstritz aims to achieve a "good status" for its local groundwater/drinking water and surface water bodies. Developments in recent years in these two areas are discussed below:

Water supply and sustainable water management in the Municipality of Bad Köstritz

The Municipality of Bad Köstritz is a member of the special purpose association *Wasser / Abwasser Mittleres Elstertal* (Water/Sanitation Central Elster Valley). Responsible for Bad Köstritz's **drinking water supply**, this special purpose association is an alliance of 36 cities and municipalities in East Thuringia that delivers the municipal services of drinking water supply and wastewater disposal to a good 133,000 citizens in its area of operation. Thanks to modern purification technology and strictly controlled pipe networks, the association is able to use the water in a virtually loss-free circulation system. This means that every litre that is withdrawn from the natural water cycle for drinking ultimately flows back into this cycle following an extensive purification process. Drinking water purity and hygiene are ensured by means of continuous quality controls at the waterworks and through independent analyses conducted by external testing labs and state supervisory authorities. The multi-purpose association *Wasser/Abwasser Mittleres Elstertal* conducts various measures within the scope of the drinking water supply process. One example involves connecting the municipal district of Gleina to the elevated tank at Bad Köstritz (a water storage reservoir for drinking and service water), so as to secure Gleina's supply of drinking water. Previously Gleina got its supplies from a spring, however the security of supply was limited. Following repurposing and reconnection, it is now possible to **use the spring in Gleina**. The spring itself was handed over to the Municipality of Bad Köstritz by the multi-purpose association and is now used to supply the fire pond, whereby the spill-over flows into a pond biotope.

As climate change advances, drinking water is becoming an increasingly precious commodity. Extreme dry periods in recent years have made the impacts of climate change very apparent in Germany, too. To save resources, it is often expedient to use rainwa-

ter (service water). This can be collected in cisterns to save using drinking water. Cisterns thus allow for the use of readily available rainwater instead of drinking water produced at high energy costs from groundwater or surface water. A cistern therefore reduces the need to expensively pump up groundwater. In the event of heavy rains, the cistern also serves as a retention basin for surface water that cannot drain off. Against this backdrop, the Municipality of Bad Köstritz has stepped up **the use of rainwater cisterns** in recent years. For instance, in keeping with a municipal council resolution (2017), an existing sewage treatment plant was re-purposed as a rainwater cistern (8 m³) at the fire-fighting depot in 2021 and 2022. The rainwater is funnelled in via a roof drainage system. In future, another cistern that currently has drinking water as its source (Julius-Sturm Monument, Haus des Gastes) is switch to rainwater. In the years ahead, a cistern is also to be

Photo 11: Village community center in the district of Reichardttsdorf with biological sewage treatment plant © Stadt Bad Köstritz



used to irrigate green spaces (cistern stream water/ groundwater with a solar-powered pump at the junction of Werner-Sylten Street and Heinrich Schütz Street; rollout is expected in 2024/25). This cistern, which collects groundwater via a man-made stream bed, is to be equipped with a solar-powered pump for irrigation. Currently the groundwater being pumped up is not being used but flows underground into the *Weißer Elster* River.

Owing to the ongoing weather extremes and the long dry periods, **basic irrigation for trees** is to be secured at around 20 sites along inner-city roads in future **using cistern-fed watering bags**. The water will come from existing rainwater cisterns.

Furthermore, work is currently underway to boost the **eco-friendly irrigation of green spaces**. This includes using rainwater from an above-ground water tank for the purpose of green area irrigation in the Dahlia Garden and irrigating green areas at the municipal outdoor leisure pool.

Besides drinking water supplies, the multi-purpose association *Wasser/Abwasser Mittleres Elstertal* is also responsible for **wastewater disposal**. Wastewater engineering has the job of collecting any wastewater that is generated in human housing and workplaces and directing it away from these areas so that it can be treated and then discharged back into bodies of water without causing any harm. The association's wastewater disposal concept describes the current status of public wastewater disposal and sets out the scheduled timeframe and estimated costs of future construction measures needed to safeguard fulfilment of its remit for wastewater disposal. The concept is updated at regular 6-yearly intervals. Wastewater is channelled via the public sewage system and treated in local sewage plants. Municipal sewage plants thus play a major role in reducing pollution by nutrients and other contaminants. Following a resolution by the municipal council in 2022, a new **eco-treatment plant** was installed at the community centre in the Reichardtshaus area of the Municipality of Bad Köstritz. A fully biological

purification plant was thus planned and installed at the newly erected community centre replete with a fire-engine garage. Purified water is channelled into the trout stream.

Surface water

With respect to surface water, the programme of action devised for Bad Köstritz's Sustainable Development Strategy states that the active **restoration of water bodies** has a high priority and efforts should be made to push ahead with corresponding measures. Generally, water body restoration involves initiating or accelerating the recovery of an ecosystem disturbed by humans. Thus, restoration can improve the ecological status of water bodies, making them more attractive. In keeping with the programme of action, a local pond in Gleina has already been restored to a near-natural state and a pond in Pohlitz has been fully restored (pond in Gleina: construction measures for a semi-natural design and to minimise water loss; pond in Pohlitz: semi-natural re-design while taking account of its concomitant function as a fire-fighting pond).

Bad Köstritz is located in the middle reaches of the **Weiße Elster River**, a tributary of the River *Saale*. In all, the river is 257 kilometres in length. Initially, it flows through the Czech Republic and then for 245 kilometres through the Federal German States of Saxony, Thuringia and Saxony-Anhalt. The joint Council for Water Body Ecology of the German Anglers' Association (DAV) and the environmental protection association *NaturFreunde Deutschlands* (Friends of Nature, Germany) chose the *Weiße Elster River* as the "River Landscape of the Year 2020/21". This award highlights the way in which a river shapes a landscape and society. The *Weiße Elster River* is considered one of the most important rivers in Central Germany and has more than 1.5 million people living in its 5,300m² catchment area. The *Weiße Elster River* is a typical contemporary body of flowing water: in places relatively close to natural conditions, while some stretches are more, others less, heavily modified by human usage, including extreme curtailments through straightening measures and re-routing. Against this backdrop, this award calls for the conservation and safeguarding of landscapes, their habitats and ultimately their ecosystem services. Water quality in

Photo 12: River course Weiße Elster Bad Köstritz © Stadt Bad Köstritz



the *Weiße Elster* River has improved considerably in recent years, but still falls short of the EU “good status” requirements (see above). According to the authorities in Thuringia, Saxony and Saxony-Anhalt, the problems concern harmful substances such as mercury and phosphorous. Furthermore, straightening measures and river embankments have deprived animals and plants of key habitats. In many places, the floodplains of the *Weiße Elster* River are not in a natural condition, i.e. they are structurally deprived,

regulated or diked and thus not part of the river landscape. It is thus necessary to restore large parts of the Elster floodplains as well as individual sections of the river. In future, the river should be able to “meander freely and create the space it needs” around Bad Köstritz. This will lead to many different water body structures that are akin to a natural body of water.

Photo 13: Weir White Elster Bad Köstritz © Stadt Bad Köstritz



New public toilets

Public toilets not only enhance the quality of public spaces, they also promote good public health and hygiene. Germany's municipalities are not obliged per se to provide their citizens with free public toilets as part of their duty to deliver SGIs. Nevertheless, the Municipality of Bad Köstritz increased the **availability of public toilet facilities** in 2023. Thus, public toilets are now available during opening times in the municipal administration and in the *Haus des Gastes* (tourist information and event centre); appropriate signage is also on hand for directions.

Photo 14: Establishment of a public toilet in the city hall (palace building) © Stadt Bad Köstritz





3.2 SDG 7 - Affordable and Clean Energy

3.2.1 SDG 7 - Introduction and relevance for German municipalities

SDG 7 aims to ensure access to affordable, reliable, sustainable and modern energy for all. A secure, environmentally sound and affordable supply of electricity and heat is key to social and economic development. It is also directly linked to environmental protection and climate action. Energy and heat security, environmental compatibility and affordability form a triad of energy policy goals. In Germany, climate and energy policy as part of the energy transition aims to decarbonise energy systems by promoting renewables, reducing energy consumption and increasing energy efficiency. This is designed to achieve the overarching goal of carbon neutrality. The trans-

formation towards a sustainable energy supply must be implemented in various sectors (energy and agriculture, industry, buildings and transport). Achieving digitalisation and innovation by investing in research and new technologies plays an important role in this.¹² When localising implementation of this SDG, German municipalities on the whole face the following thematic tasks (please also compare these with the targets for SDG 7 in the annex):

- Promoting renewable energy
- Increasing energy efficiency
- Ensuring access to an affordable and reliable energy supply.

¹² See Germany's Voluntary National Review to the High-Level Political Forum 2021 and the German Sustainable Development Strategy 2021.



3.2.2 Overview of qualitative aspects and indicators

Qualitative aspects:

- Energy and climate action - Overarching objectives of the Municipality of Bad Köstritz
- Renewable energy
- Local heating
- Energy efficiency
- Energy and climate action - Municipal buildings

Indicators:

- Photovoltaic systems
- Electricity and heat from biomass
- Hydroelectric power
- Reduction of greenhouse gas emissions

3.2.3 Contributions of the Municipality of Bad Köstritz to the SDG

Energy and climate action - Overarching objectives of the Municipality of Bad Köstritz

With its 2021 Federal Climate Change Act (KSG), the German Government has undertaken to reduce greenhouse gas emissions (GHG) by 65 per cent compared to 1990 levels by the year 2030. By 2045, Germany is to be carbon neutral, meaning greenhouse gas emissions and their elimination have to be in balance.

Against this backdrop, the Municipality of Bad Köstritz is also engaging in the fields of energy and climate action. In the **Sustainable Development Strategy's programme of action** this constitutes a thematic sector in its own right. The vision states that the Municipality of Bad Köstritz wishes to be a role model for climate action and thus commits to the climate goals of the Federal State of Thuringia. By the year 2030, per-capita output of climate-harming emissions is to have already dropped substantially. To this end, the following operational objectives and support measures are enshrined in the programme of action:

- Operational objective: Local energy management solutions are implemented; the components include consumption metering, controlling, attendant recommendations for action and priorities (cost/benefit).
 - Measure: Regularly record and evaluate energy consumption in municipal properties.
- Operational objective: Energy demand in municipal property is lowered by means of optimised management and the consistent use of efficient technology. New builds and refurbishments are designed to produce highly energy-efficient buildings.

- Operational objective: The topics of sustainability, energy and climate action are integrated in education work in children's nurseries and schools as well as in other educational services in the region.
- Operational objective: The Municipality of Bad Köstritz pro-actively communicates its climate goals through its action and develops platforms for information and participation.

Renewable energy

Renewables are a central pillar of the energy transition. Against this backdrop, the Municipality of Bad Köstritz has stepped up the **installation of photovoltaic systems** in recent years. For example, in compliance with a resolution by the municipal council, some 84 photovoltaic panels with a total output of 30kW were installed on the rooftops of Bad Köstritz's leisure pool building in 2021. This system has an expected service life of 25-30 years. Photovoltaic systems have also been installed on other municipal properties (the sports grounds *Am Drehling* Bad Kö-

stritz, the kindergarten in Caaschwitz, a residential building with 11 apartments in Hartmannsdorf). Plans are currently being drawn up for the installation of a PV system on the building that houses the Medical Care Centre which is situated on municipal land (*Palais* building, Town Hall). This system is to power the building and the municipal administration, rendering them self-sufficient. The area available measures around 100 m² in all. Seeing as the building is listed and its refurbishment was only recently completed in 2016, its eligibility for support first has to be clarified. Furthermore, the installation of an elevated PV system in the stadium area is currently being looked into. The idea is for this municipal property (stadium with a floodlighting system and a sports hall) to meet its high energy demands in future with its own PV system. In this regard, talks are to be held with a specialist planner first. A large number of private households in the Municipality of Bad Köstritz have installed photovoltaic panels on their homes in recent years to generate electricity for self-consumption - some of them with public grid feed-in.

Photo 15: Photovoltaic system on the roofs of the buildings of the leisure and recreation baths © Stadt Bad Köstritz



In addition to photovoltaics, the Municipality of Bad Köstritz also harnesses other renewable energy sources: A **bioenergy plant** converts organic waste from the food industry and hospitality sector into biogas, which is then processed in cogeneration plants to create electricity and heating. Solid and liquid fermentation waste is used as organic fertiliser in the agriculture sector. In the **hydropower sector**, waterpower is converted into electric energy and fed into the public grid. Two turbines secure the feed-in of 1.2 million kilowatt hours of electricity per year.

The Municipality of Bad Köstritz also supports sustainable **energy utilisation**. Energy utilisation refers to the generation of electricity, heating and gas from available resources. The Sustainable Development Strategy's programme of action states that green waste from municipal green space maintenance

work, as well as from private households, should be reused as an energy carrier. For example, waste from pruning and clipping generated by Bad Köstritz's municipal building yard is to be collected and processed together with green waste produced by the Municipality of Crossen a.d. Elster. The plan is to use green waste to generate heat.

Photo 16: Photovoltaic system at the sports field "Am Drehling" © Stadt Bad Köstritz



Local heating

Since a large proportion of energy is consumed for heating purposes, the heating sector plays a major role in the energy transition process. Local heating offers a number of advantages. It is based on the principle of central heat generation and distribution, whereby the thermal energy generated by a central heating system is distributed to consumers via a heating network. In contrast to district heating, local heating involves supply over a short distance. In comparison to other technologies, centralised heat generation is energy efficient and the networks can be equipped with seasonal thermal energy storage systems, thus enabling a high level of solar thermal energy, for example.

Photo 17: Bioenergy plant © Stadt Bad Köstritz



Against this backdrop, the Municipality of Bad Köstritz is supporting the scaling-up of local heating. For example, a few years ago already, the municipality joined forces with Köstritz's black beer brewery to set up a **local heating network to utilise waste heat** (within the scope of a private-law contract with the brewery). This network uses waste heat to provide warm water for Bad Köstritz's leisure pool and to heat the municipal sports hall and the administration buildings of the Municipality of Bad Köstritz. This local heating network is set to be expanded in future. Initial talks about this have already been held with the brewery. Preliminary reviews have shown that all buildings scheduled for connection to the network are close by - and only municipal land is traversed - so that further planning by a specialist consultant can now go ahead.

Photo 18: Utilization of waste heat from the Köstritzer Schwarzbier brewery for the hot water preparation of the leisure and recreation baths
© Stadt Bad Köstritz



Energy efficiency

Raising energy efficiency is vital in order to achieve the energy and climate action goals described. Municipal street lighting is a sector with substantial potential for saving energy. Public street lighting accounts for up to 40 per cent of municipal electricity consumption. Switching to LED lighting has the capacity to reduce this consumption by more than 80 per cent in places. The investments are amortised by the savings in energy, usually within a period of five to ten years. The Municipality of Bad Köstritz has therefore been engaged in an annual tender since 2017 within the scope of its budget to **retrofit street lighting** from sodium vapour lamps to LED lamps. To date, streetlights in four districts and in various inner-city areas have been replaced by LED light bulbs with a maximum of 20 Watts. To minimise light pollution (the far-reaching illumination of the night sky and surroundings), warm-white street lighting is used. In this way, the harmful environmental impacts referenced in the Federal Immission Control Act (*BImSchG*) can be reduced.

Energy and climate action - Municipal buildings

The Municipality of Bad Köstritz is also committed to climate action in its municipal buildings. This involves the gradual replacement of fossil fuels by renewables and energy-saving measures. Facility management, also for municipal property, is the remit of the municipality's own company. This process determines efficiency levels and savings potential in all sectors (comparison of energy types and consumption, alignment of heating curves, pump renewal and replacement of entire systems). In the case of older systems, all options for replacing the fossil fuels and switching to renewables are examined. These steps are also supported as part of initial climate action consultancy for Bad Köstritz / Crossen an der Elster.

Photo 19: Renewal with energy-efficient pumps in the leisure and recreation baths © Stadt Bad Köstritz



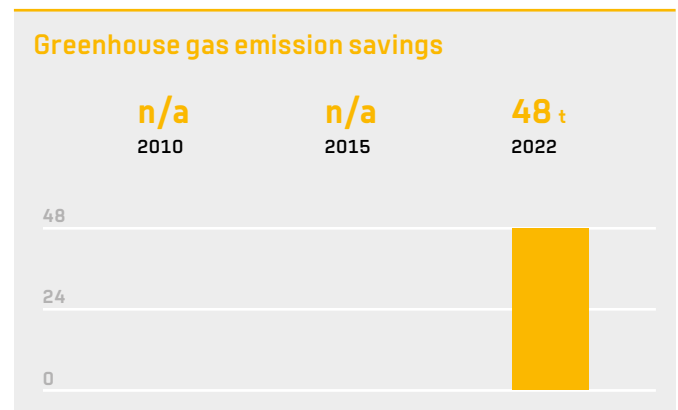
3.2.4 Indicators



Greenhouse gas emission savings

Greenhouse gas emissions savings in tons per year (source: City of Bad Köstritz)

With the tightening of the Climate Protection Act, the German government has set the goal of becoming largely greenhouse gas-neutral by 2045, and emissions are to be reduced by 65 percent by 2030 compared to 1990. Greenhouse gases contribute significantly to global warming, Avoiding the burning of fossil fuels as completely as possible and thus substantially reducing greenhouse gas emissions is therefore one of the most important goals on the goal of achieving climate neutrality. The indicator shows how many tons of greenhouse gas emissions are saved per year in the town of Bad Köstritz. In 2022, the saving is 48.00 tons, comparable data is not available. The savings are achieved through the use of energy-efficient pump systems. To this end, the city council decided to replace the pump systems at the municipal outdoor pool in 2019. The 22-year-old pump technology was brought up to the current state of the art. Demand-based control of individual treatment systems, individual control of the circulation pumps and automated centralized control



lead to a drastic reduction in energy consumption. By purchasing and installing highly efficient pumps and associated control technology, up to 81 MWh of electricity can be saved each year. That is almost 45% of the previous electricity requirement and therefore 960 tons of CO₂ over the useful life of 20 years. However, there is still great potential for reducing greenhouse gases in the municipal environment. Last but not least, public properties are demanding to maintain.

7 AFFORDABLE AND CLEAN ENERGY



Photovoltaic systems

No. of photovoltaic systems (PV systems) in Bad Köstritz [Source: Municipality of Bad Köstritz]

Photovoltaic systems harness the sun's energy by directly converting sunlight into electricity. Use of photovoltaics (PV) has grown continuously in recent years and, alongside power generation from wind turbines, is a major contributor to power supply in Germany. This indicator provides information on the number of PV systems in the municipality. In the year 2020, the Municipality of Bad Köstritz had four PV systems in operation. In 2020, the municipal council decided to install a PV system on top of the municipal leisure pool. Some 84 PV panels with a total output capacity of 30 kW were thus installed on the leisure pool's rooftops. The PV system is operated and owned by BürgerEnergie Saale-Holzland eG. The system has an expected service life of 25 by 30 years. The PV system enables the municipality to access reasonably priced electricity which is used directly for the leisure pool and also for the pool's new water pumps. Efficient technology and use of off-grid renewables can drastically lower energy and operating

Photovoltaic systems

n/a

2010

3

2015

4

2020



costs. Unused energy is fed into the public grid. The regional pressure group Saale-Holzland e.V. and its member municipalities (including Bad Köstritz with its various districts) have been involved in a nationwide project to reduce greenhouse gas emissions since 2009 already (bioenergy region). Today already, some 80 per cent of the region's electricity demand is met by renewable sources.

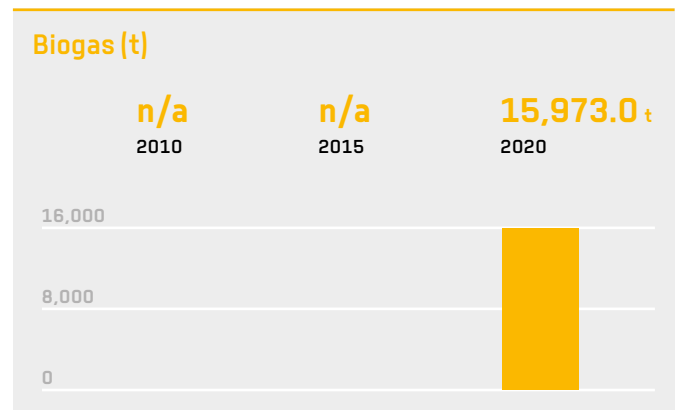
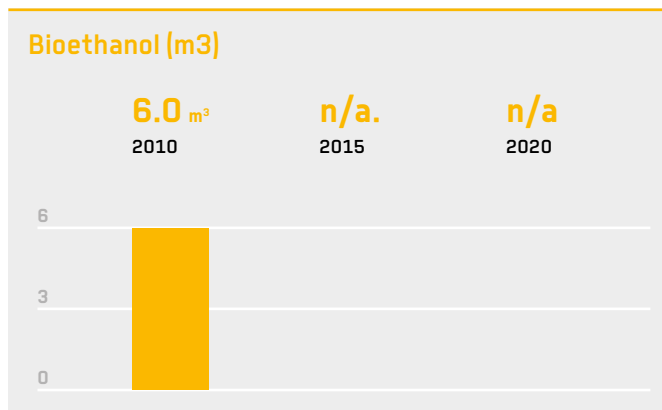


Electricity and heat from biomass

Electricity and heat from biomass in m³/tonnes per year (Source: Danpower Group website)

The use of biomass for power and heat generation is often controversial. This is because, although bioenergy has a better GHG balance than fossil energy, the cultivation of biomass can still have negative impacts on people and the environment. Nonetheless, around 50.0bn kWh electricity was generated Germany-wide in 2021 from biomass and biogenic waste. The main sources harnessed for biomass power generation are biogas (28.2 bn kWh), solid biomass (10.9bn kWh) and the biogenic share of waste (5.8bn kWh). Installed power generation capacity from biomass went up nationwide by around 1 per cent in 2021 to 10,478 MW. Bad Köstritz’s bioenergy plant processes

packaged and non-packaged organic waste from the food industry and hospitality sector; in 2010 this resulted in around 6 m³ of bioethanol. Each year, biogas is also produced from up to 60,000 tonnes of organic waste. In 2020, the total was around 15,793 tonnes. This is used in cogeneration plants to produce electricity and heat. Solid and liquid fermentation waste is used as organic fertiliser in the agriculture sector. The heat produced is used to supply a neighbouring chemical company with steam. All of the additional electric energy generated is fed into the public power grid. Power and heat generation from a biogas plant saves around 5,500 tonnes of CO₂ each year.



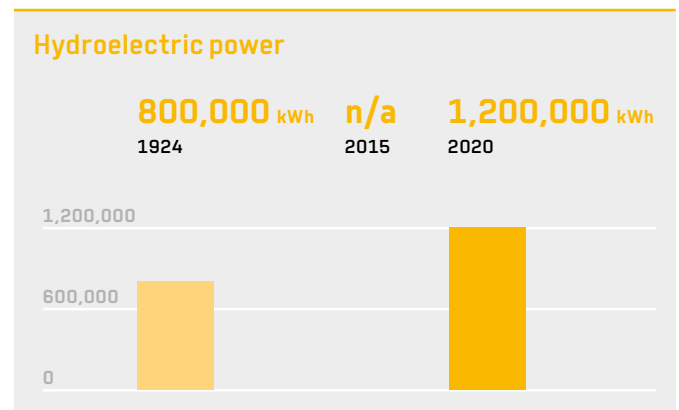
7 AFFORDABLE AND CLEAN ENERGY



Hydroelectric power

Electricity generated from hydropower in kilowatt hours per year
(Source: Municipality of Bad Köstritz)

Hydropower is another component in the renewable energy sector. There is a long tradition of harnessing the power of water. To this day, hydropower remains a key renewable energy source. At the same time, using rivers for energy generation can lead to many different socio-economic and environmental impacts that should not be overlooked. At the start of the 1920s, the former rye mill in Bad Köstritz was remodelled and hydropower was converted into electricity for feed-in to the public power grid. In 1924, it was already producing some 800,000 kWh. In the years that followed through to reunification, it was used for different purposes, and even decommissioned at one point. In 1994 electricity production was further extended. Two turbines feed some 1.2



m kWh of electricity into the public power grid each year. In the bigger picture of all renewables, the hydropower sector plays a less important role than wind and solar energy in Germany.



3.3 SDG 9 - Industry, Innovation and Infrastructure

3.3.1 SDG 9 - Introduction and relevance for German municipalities

SDG 9 aims to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. These three elements touch on many areas - such as digitalisation, or information and communications technology. Innovation has the potential to make a key contribution to current challenges, such as climate action and resource conservation, or demographic change. Innovations also play an important role in promoting sustainable industrialisation, which aims among other things to achieve more resource-efficient and low-emission production. The term "infrastructure" includes both technical and social infrastructure (e.g. infrastructure for transport, energy and water/wastewater, as well as educa-

tion and health care). When planning and designing infrastructure, various requirements (for instance concerning health, climate change mitigation and adaptation, securing natural resources or equal participation) must be taken into account simultaneously.¹³ For German municipalities, the following areas are therefore especially important for implementing this SDG (please also compare these with the targets for SDG 9 in the annex):

- Promoting innovation
- Supporting sustainable industrialisation and business start-ups
- Establishing sustainable infrastructure, especially for information and communications technology.

¹³ See Germany's Voluntary National Review to the High-Level Political Forum 2021 and the German Sustainable Development Strategy 2021.



3.3.2 Overview of qualitative aspects and indicators

Qualitative aspects:

- Digitalisation
- Helping local companies embrace sustainability
- Innovation - The examples of Bad Köstritz's chemical company and phosphorus recovery from sewage sludge
- Infrastructure

3.3.3 Contributions of the Municipality of Bad Köstritz to the SDG

Digitalisation

Digitalisation has led to far-reaching changes in many areas of society in recent years, giving people new and faster application options. At the same time, as digital systems continue to advance, it is important to have an efficient and reliable data transfer infrastructure. Political consensus does exist regarding the need to expand the network in Germany. Indeed, this has been underway since 2009 following the German Government's so-called "broadband strategy". Efficient fibre-optic broadband communication is regarded as the technology of the future instead

Photo 20: Groundbreaking ceremony for the expansion of broadband supply in Bad Köstritz and neighboring communities with Henry Frey, (Managing Director of axians), Bernd Becker (Mayor of Kraftsdorf), Manuela Boigs (Head of the Construction Office of the town of Bad Köstritz), Oliver Voigt (Mayor of the town of Bad Köstritz), Hendrik Westendorff (Managing Director of Thüringer Netkom Gesellschaft) f.l. © Stadt Bad Köstritz



of copper cable/DSL. The major internet nodes and connecting cables - in other words the main communication lines - in Germany now all use fibre optics. The reason for the deficits in network quality in Germany is the large proportion of copper cables in the "last mile", that is from the last junction box to the individual household. The German Government is committed to achieving comprehensive gigabit connectivity by the year 2025.

Against this backdrop, the Municipality of Bad Köstritz is supporting broadband rollout by **expanding the fibre optic network in the entire inner-city area**. In the drive for broadband connectivity, the fibre optic network is being extended to hitherto undersupplied areas in cooperation with neighbouring municipalities. A supported measure, this led to the conclusion of a concession contract in 2021. The bid for the fibre optic network was won by the Weimar-based company *Thüringer Netkom GmbH* following an extensive tender procedure. The expansion of fibre optic network capacities was contractually agreed at the start of 2021 by the Mayor of the Municipality of Bad Köstritz and the Managing Director of *Thüringer Netkom GmbH*. This contract provides for the investment of a total of EUR 11,648 million in the growth of the broadband network. By 2024, more than 385 kilometres of optic fibre are to be laid, which will necessitate around 105 kilometres of conduits. Moreover, traditional civil engineering work involving excavation and ditch digging is required along a stretch of approximately 63 kilometres. Almost 1,000 households, 142 companies and enterprises as well as six schools and seven public institutions will get access to more efficient fibre optic broadband connections as a result. *Thüringer Netkom* will install all new connections directly in the building as fibre broadband. This means that all customers - in private households too - will have a broadband connection of up to 1 gigabit (Gbps). The expansion of the fibre optic network is possible thanks to the federal broadband funding programme (*Bundesförderprogramm Breitband*) of the Federal Ministry for Digital and Transport (BMDV). This state funding is earmarked for deployment in regions with low network coverage, the so-called



Photo 21: In Bad Köstritz, a digital city guide leads to the most important sights via QR code (Dietrich Heiland is happy about this service of the city)
© Stadt Bad Köstritz

“blank spots”. The investment is thus a major cornerstone of efforts to preserve rural environments.

A best-practice example in the field of digitalisation and innovation is the **establishment of a digital travel guide** in Bad Köstritz. By activating a QR code that produces information on special tourist attractions, people can now use their smartphones as a virtual travel guide for their trip around Bad Köstritz. At various locations in Bad Köstritz, residents and visitors can quickly and readily access digital information about key sights and outstanding figures. Texts, photos or podcasts on individual sights can be viewed or listened to (content has already been translated into English and Spanish owing to the scheduled partnership with the Municipality of Huamantla - see section on SDG 17). In 2022, other key locations in Pohlitz, Reichardtsdorf and Gleina were added to the guide. The number of sites thus now stands at 40 with the

new district of Hartmannsdorf scheduled to be included as of 2023. An additional digital map on the municipality’s website allows users to explore all the locations online. The project also includes an analog map which has all the QR codes on it. This map is available at all public facilities in the municipality. Overall, the digital travel guide is an innovative addition to the municipality’s tourist services. There has been a great deal of media interest in the rollout and ongoing development of the digital travel guide. This new tool has also been widely accepted by the local population. Together with the *Heimatverein* (local history association) and Bad Köstritz’s firms and business association, the municipal administration under the leadership of the Coordinator for Municipal Development Policy, has made an important contribution to sustainable tourism. Support for sustainable tourism, along with the attendant institutions on site, is

enshrined in the Sustainable Development Strategy's programme of action.

Digitalisation of local government is an important topic in Bad Köstritz. The focus here is on reducing paper usage. This is directly related to the digitisation of even more procedures. The Sustainable Development Strategy's programme of action states that the administration is to be essentially paperless by 2028.

Photo 22: In Bad Köstritz, a digital city guide leads to the most important sights via QR code (Dietrich Heiland is happy about this service of the city) © Stadt Bad Köstritz



Helping local companies embrace sustainability

There are a number of companies in Bad Köstritz that pursue sustainable objectives. It is important to focus media attention on them so that the population at large can learn about the many different sustainability concepts. With this in mind, the Municipality of Bad Köstritz is helping to **publicise green activities by Bad Köstritz's businesses**. Ongoing all year round, the campaign is being conducted in cooperation with the One World House in Jena. This publicity drive connects activities by Bad Köstritz's businesses with the Sustainable Development Goals (SDGs) and thus allows businesses to show the public how they are helping to implement the 2030 Agenda. One example is a flyer featuring specific SDGs that demonstrates how the garden design and landscaping company Panzer is honouring its commitment to sustainability. Broad-scale distribution is achieved by including the flyer in every package of dahlias dispatched in Germany (presently around 2,500/per year). A new edition was produced by the municipal administration in 2023. Overall, showcasing SDG engagement by Bad Köstritz's businesses when despatching packages of dahlias is helping to raise awareness of the 2030 Agenda throughout Germany.

Innovation - The examples of Bad Köstritz's chemical company and phosphorus recovery from sewage sludge

Various innovative approaches are being pursued in the town of Bad Köstritz. This can be illustrated by the two examples "Bad Köstritz's chemical company" and "Phosphorus recovery from sewage sludge".

The **chemical company Chemiewerk Bad Köstritz GmbH** produces special inorganic chemicals, specifically silicic acids, zeolites and sulphur compounds. Besides the actual raw materials, production consumes large amounts of energy in the form of electricity and natural gas.

Various energy-efficiency measures have already been implemented in recent decades to achieve the

Photo 23: Fair trade and regional products complement each other in Bad Köstritz © Stadt Bad Köstritz



sustainable use of energy sources. For more than 10 years now, efficient energy usage has been an integral component of corporate policy thanks to a DIN/ISO 50001-based energy management system.

The majority of heating required for the production processes is obtained in the form of steam by burning natural gas in several combined heat-and-power (CHP) systems while generating electricity.

In a current sulphur combustion project, which is presently in the commissioning phase, the raw materials sulphuric acid and sulphur dioxide, which have up till this point been sourced externally, are now being produced directly on site. Not only does this cut the volume of transport for these raw materials by more than half, it also generates so much waste heat that natural gas consumption, and thus the emission of carbon dioxide in the entire chemical plant, has been reduced by up to 30%.

The *Chemiewerk Bad Köstritz* is also planning further developments in the field of sustainable energy generation and supply in future. Specifically, it has plans to use photovoltaic electricity which it will source directly from a solar park to be set up next to the chemical factory. Also, the *Chemiewerk Bad Köstritz* is looking to purchase the natural gas substitute biogas directly from a biogas plant in the industrial park which is seeking to purify and feed in the gas it produces. With these two measures, the *Chemiewerk Bad Köstritz GmbH* could become virtually self-sufficient and almost completely carbon free within a short period of time.

The *Chemiewerk Bad Köstritz* is not averse to the possible use of green hydrogen and has thus joined the *Hypos e.V. Network* which aspires to develop the supply, handling and use of hydrogen in Central Germany.

The **Zweckverband zur kommunalen Klärschlammverwertung Thüringen**, headquartered in Bad Köstritz, has committed itself in its principles to participate in the implementation of the global sustainability strat-

egy of the 17 goals of the 2030 Agenda. The specific challenges of the Thuringian special-purpose association with its 19 member associations or municipalities are apparent with regard to sustainable development, particularly in the areas of climate, environment, innovation and energy.

The planned construction of an innovative climate-neutral plant will centrally recycle sewage sludge from Thuringia and recover phosphorus from it. Phosphorus is a fundamental prerequisite for all plant growth. Its sufficient availability is consequently of considerable importance for the world food program with a growing world population. Currently, phosphorus is mainly obtained by processing phosphate ores from North Africa. The deposits are finite in the foreseeable future. By means of innovative technologies, this globally important raw material can be recovered from sewage sludge or sewage sludge ash. Germany consumes about 170,000 t of phosphorus per year. With approx. 57,000 t per year, sewage sludge has by far the largest recovery potential for phosphorus. With the commissioning of the East Thuringia recycling plant, the legal requirement for continuous phosphorus recovery will be met.

Infrastructure

Public infrastructure comprises both technical infrastructure (e.g. in the fields of energy, traffic, drinking water, information and communications technology) and social infrastructure (e.g. for education or in the health sector). Numerous infrastructure facilities and systems are discussed in the sectors on SDGs 6, 7, and 11 (see, for example, the section on SDG 11 concerning the expansion of infrastructure for e-mobility), including infrastructural expansion for broadband rollout as discussed above.

Another example of socio-economic infrastructure is the supply of foodstuffs, which constitutes a key element of services of general interest (SGIs). Embedding sustainability in SGIs with a view to promoting sustainable consumption is central to realising

the 2030 Agenda. To achieve a sustainable, regional food supply system, it is necessary to establish corresponding infrastructures and to support regional suppliers (e.g. permission to hold weekly markets). **Assisting regional producers with marketing their goods** is enshrined in the programme of action for the Municipality of Bad Köstritz's Sustainable Development Strategy. This includes establishing a regional marketing group that can expand the offer of regional and fair products through networking and by brokering contacts. In this way, the municipality can support regional suppliers of fair products from the region. Providing public space for advertising and marketing is also intended to assist organic companies in the region with the marketing of their products. When the Municipality of Bad Köstritz started work on its Sustainable Development Strategy, a regional marketing network was set up between producers - based on the municipal development strategy for the dedicated *Elstertal* development area (*Gemeindliches Entwicklungskonzept Entwicklungsraum Elstertal*). Furthermore, the municipal authorities assisted a start-up company (PHILEX Germany GmbH & Co. KG) with the search for a suitable building and for local marketing opportunities. One result is the organisation of a fresh food market at the respective market squares in Bad Köstritz and Crossen with a wide range of regionally grown organic produce. Another goal under this Sustainable Development Strategy is to make sure that municipal agricultural land is predominantly leased to organic farmers. Hence the use of corresponding award criteria when selecting leasees.



3.4 SDG 11 - Sustainable Cities and Communities

3.4.1 SDG 11 - Introduction and relevance for German municipalities

SDG 11 aims to make cities and human settlements inclusive, safe, resilient and sustainable. Municipalities must rise to face current challenges such as climate change, resource scarcity, demographic change and migration. Against this background, a sustainable, integrated urban development policy will combine social, economic and ecological goals and takes all relevant interests into account. Among other things, this involves promoting compact and green urban structures, socially balanced and mixed urban neighbourhoods, and affordable housing. Neighbourhoods are places where people reside and interact socially. They also form the space where people lead their everyday lives. This makes them especially important for sustainable development. The reduction of environmental pol-

lution by municipalities (e.g. air quality and noise abatement), and the promotion of sustainable mobility (e.g. by strengthening modes of eco-transport), are also key components of SDG 11.¹⁴ In summary, for German municipalities the following themes play a particularly important role in implementing this SDG (please also compare these with the targets for SDG 11 in the annex):

- Implementing integrated urban development, promoting sustainable neighbourhoods and affordable housing, and reducing land take
- Promoting sustainable mobility
- Implementing comprehensive disaster risk management
- Promoting air quality and noise abatement.

¹⁴ See Germany's Voluntary National Review to the High-Level Political Forum 2021 and the German Sustainable Development Strategy 2021.



3.4.2 Overview of qualitative aspects and indicators

Qualitative aspects:

- Sustainable urban planning - Land management and housing
- Sustainable urban planning in the context of climate change
- Sustainable mobility

Indicators:

- Land take
- Land take for transport infrastructure
- Vacancy rate
- Passenger car density

3.4.3 Contributions of the Municipality of Bad Köstritz to the SDG

Sustainable urban planning - Land management and housing

The Municipality of Bad Köstritz attaches great importance to sustainable urban planning. This applies especially to land management and housing supply. Aspects that are relevant to SDG 11 mostly fall under the remit of the Municipality of Bad Köstritz's building authorities. Cooperation with other actors, e.g. from politics, business, the housing sector and co-operatives, other municipalities and associations, is absolutely essential. Assigning thematic responsibilities to the municipal authorities in Bad Köstritz, and maintaining close cooperation with decision-making bodies, enables tasks to be defined concretely and implemented relatively swiftly. Examples at regional level include the integrated rural development concept *Zukunfts(T)raum Elstertal* (Future (Dream) Space Elstertal) and the municipal development strategy for the dedicated development area *Elstertal (Gemeindliches Entwicklungskonzept Entwicklungsraum Elstertal)*.

Sustainable urban planning is addressed in various places in the **Sustainable Development Strategy's programme of action**. Diverse objectives and measures thus have a cooperative design and are scheduled to be rolled out in collaboration with the neighbouring municipality of Crossen an der Elster. Key operational objectives and relevant measures are presented below:

- Operational objective: Under the leadership of the Municipalities of Bad Köstritz and Crossen, a network for sustainable land management is established with various, relevant actors.
 - Measure: Establish cooperation and/or a network consisting of administration, business and environmental associations; specify evaluation criteria for sustainable land use man-

a resolution by the municipal council. The first input involves a review of construction sites. Overall, new builds are to be kept to a minimum and infill development promoted. To this end, close contact is to be established with owners of the relevant plots of land.

An example of sustainable land management in the recent past concerns **the use of a disused discount-market building** that was re-purposed for use by Bad Köstritz's voluntary fire service. After it became clear - in the wake of numerous structural deficits and several claims by the fire service's accident insurance - that a new site had to be found for the voluntary fire service, the Municipality of Bad Köstritz organised a feasibility study which identified a joint site for the municipal building yard and the voluntary fire service. A disused supermarket building of-

Photo 24: Barrier-free access to the community center "Gucke" in the House of the Guest © Stadt Bad Köstritz



ferred sufficient fabric for re-purposing. Five garage parking spaces for fire-fighting vehicles were set up along with fire service headquarters, bathroom and changing facilities and recreation rooms. The first round of preparatory building consultations was held in March 2020 and the build itself was completed in the spring (owing to the COVID-19 pandemic and the resulting materials shortages). The rooms have since served as a base for operations by the voluntary fire service.

The Municipality of Bad Köstritz is committed to **creating affordable urban housing** which is of central importance for societal cohesion. When assessing the housing market in Bad Köstritz, two sectors must be considered in a differentiated manner: The market for private, single or multi-family homes and the market for rental accommodation in multi-storey buildings which is mostly served by housing associations and cooperatives or other landlords, some of them private. The municipal housing association *Köstritzer Wohnstätten GmbH* is, inter alia, responsible for acquiring and maintaining the stock of municipal

Photo 25: Barrier-free path through the Lower Köstritz Park © Stadt Bad Köstritz

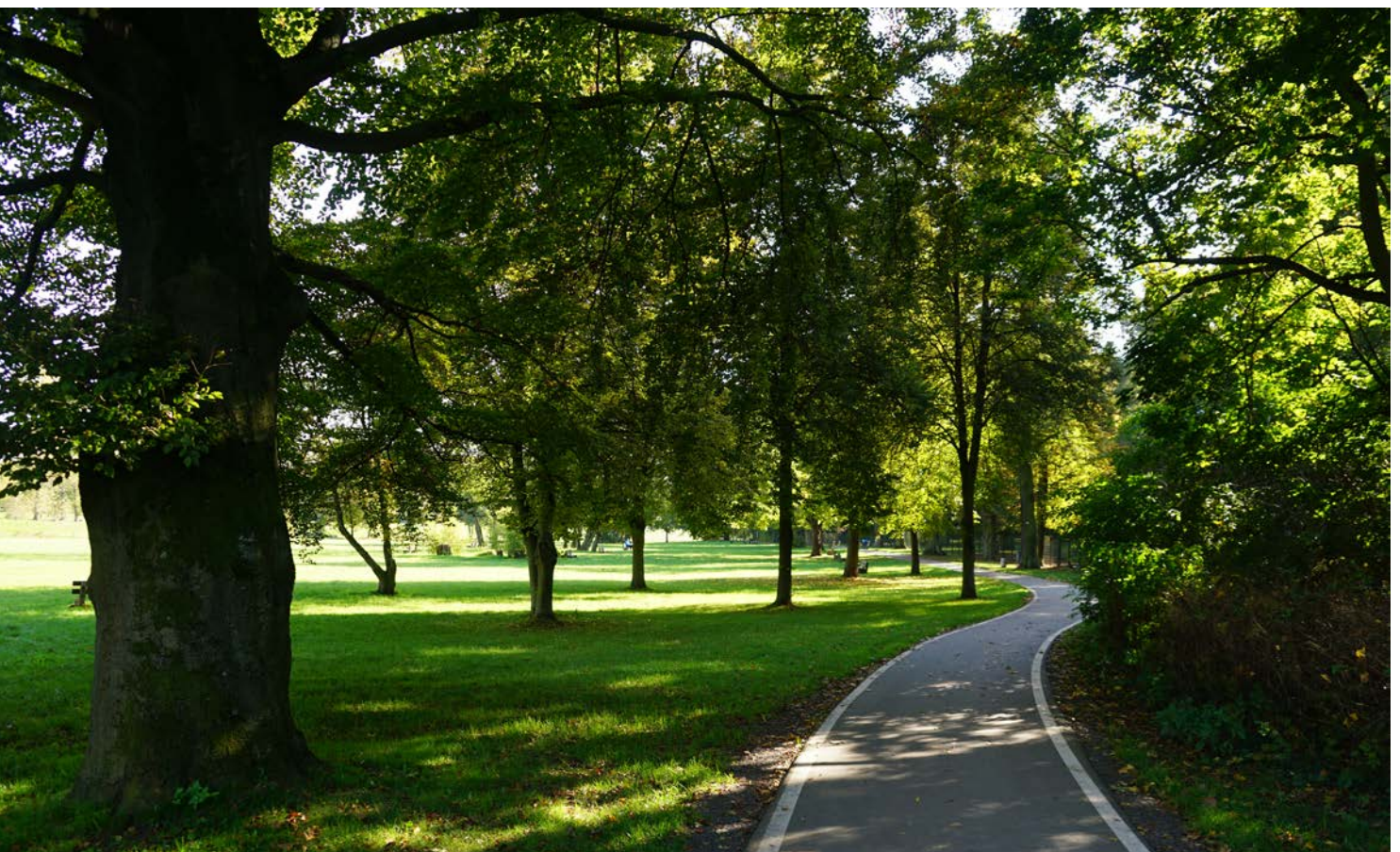




Photo 26: New building of the volunteer fire department Bad Köstritz © Stadt Bad Köstritz

apartments, and especially for honouring the housing supply remit and providing affordable rental accommodation. The vacancy rate for Bad Köstritz in 2011 was 7 per cent (recorded by ZENSUS). This is almost equal to the rate of 6.8 per cent calculated for the federal state of Thuringia as a whole. Vacancies are mostly found in multi-storey buildings, whereby the following reasons are plausible: poor state of repair, the size of the apartment, its location within the building or area, its price or the housing environment. Bad Köstritz and the municipal housing association hold regular meetings to discuss strategies and measures to maintain and increase the availability of existing affordable housing in the municipality.

With respect to **creating accessible pathways and access to public buildings** and in keeping with the Sustainable Development Strategy's programme of action, the Municipality of Bad Köstritz ensures

compliance with the principle of accessibility in all of its building measures. The municipal authorities and the adjacent Medical Care Centre are already barrier free, as are the municipal sports facilities (open-air pool, sports hall) and the newly opened citizens' centre "Gucke". Accessibility requirements have also been taken into account in the building measures underway or already completed on the garages for the voluntary fire service (Bad Köstritz and Reichhardtsdorf).

Sustainable urban planning in the context of climate change

Advancing climate change is an increasingly important priority in sustainable municipal planning. The impacts of climate change are already plain to see in Germany today. Increasingly frequent and intensive extreme weather events not only have negative impacts on human health and municipal infrastructure, they are also bad for the water, agriculture and forestry sectors. Heavy rains and flooding put people at risk and cause damage to buildings, as well as high costs due to damage repair. The number of heat waves in Germany has doubled since 1980. Heat waves impair people's quality of life, especially in densely populated settlement areas. Persistent drought results in water shortages and drought stress as well as damage to vegetation. Severe storms can also damage tree stocks, making them a danger. Municipalities thus face the challenge of developing effective adaptation strategies.

Photo 27: Natural hiking trail in the Upper Köstritz Park
© Stadt Bad Köstritz



Against this backdrop, the Municipality of Bad Köstritz is working to **counter urban warming** by ensuring effective urban greening, shading and drought-tolerant plants. This applies in particular to local recreation areas (e.g. parks, Rosarium, adventure path 2030 etc.). One example here is the re-design of the Rosarium park in keeping with a historic model, as anchored in the Sustainable Development Strategy's programme of action. The Rosarium is located in an area of Bad Köstritz that has been earmarked for re-development. It is a historical public space and a key feature of the urban landscape and has been under multi-phase refurbishment since 2020 in line with a heritage management concept. A ceremony was held in June 2022 to mark the reopening of the Rosarium following completion of extensive restoration work. The historical site with its considerable historical stock of trees and numerous lawns and planted green areas now presents itself as a "shade-giving oasis of wellness" right in the middle of the Municipality of Bad Köstritz, which makes for a cooling effect. The park is very popular with residents of the surround-

ing old people's homes as well as with many other citizens and guests. The same applies to the park located on the *Weißer Elster* River and to the adventure pathway 2030 (an educational walk through the park in Bad Köstritz which is also to be made available in a virtual format in future).

Flood protection is also a major task in the face of unabated climate change. Flood planning and structural flood protection are enshrined in the programme of action for Bad Köstritz's Sustainable Development Strategy. Owing to the experience from the last disastrous flood in the summer of 2013, Bad Köstritz is planning to set up its own water defence service for municipal flood protection. Establishing a water defence unit is one way that the Municipality of Bad Köstritz can corral and organise its flood defence

potential. Should this defence force be activated, tasks can be distributed and prepared accordingly. Furthermore, the multi-purpose association *Mittleres Elstertal* (see the section on SDG 6) is planning to install a subterranean detention basin to deal with heavy rains and thus prevent flooding. The underground detention system is to serve as a means of defending the sewage works in the event of an overload and/or extreme weather events, such as heavy rain. It should be up and running by 2025.

Photo 28: Urban greening in the redeveloped Rosarium © Stadt Bad Köstritz



Sustainable mobility

In Germany, the modal split, i.e. the volume of traffic across various modes of transport, remains heavily focused on the use of cars. Passenger transport and cargo freight and/or transport capacity have increased considerably over the past twenty years or more. The current traffic system impacts the climate, environment and public health in many different ways. Thus, the road to sustainable mobility is paved with important challenges in respect of climate action, air pollution and noise control and the protection of green spaces and natural resources. Overall, the aim is to safeguard environmentally friendly transport modalities (walking and cycling, public passenger transport) and to make motorised private transport more sustainable.

Photo 29: Electric car charging station © Stadt Bad Köstritz



One of Bad Köstritz's strategic objectives is to expand electromobility, with a view to achieving sustainable mobility, not only in inner-city areas, but in the periphery too. It is not just electromobility alone that has to be taken into account here. So too do other electrical appliances, such as smartphones and laptops. To ensure the rollout of battery-charging infrastructure can proceed in line with demand, the Municipality of Bad Köstritz resolved in 2020 to commission an **action plan for electromobility**. The overall objective of this electromobility plan in the Municipality of Bad Köstritz and its urban districts of Gleina, Pohlitz and Reichardtsdorf is to set up an action framework for the rollout of e-mobility and to undertake a targeted search for ways of setting up a charging infrastructure in Bad Köstritz and its various districts. One approach, for example, is to check whether electricity is constantly supplied to certain charging points in public areas. The implementation phase has just got underway, e.g. with the procurement of an e-bike for local government employees.

Two long-distance cycle routes - the Elster Cycle Route and the Thuringian Cities Chain - pass through the Municipality of Bad Köstritz. The inner-city cycle and hiking network is well maintained and constantly

growing (decision by the municipal council in 2019). The Sustainable Development Strategy's programme of action includes the objective of **further improving the cycle and hiking trail network**. The two following measures concern the expansion of near-natural cycling routes and hiking trails:

- Bad Köstritz will engage in the construction of rural (cycle) pathways which are essentially to be as near natural as possible.
- At suitable places in Bad Köstritz, rest areas are to be set up for cyclists, hikers and/or water hikers.

Overall, the aim is to create an increasingly semi-natural and interconnected network of pathways with rest areas and information points in keeping with the demands of nature and landscape conservation.

With regard to the public transport sector, the Sustainable Development Strategy's programme of action provides for the establishment of **citizens' buses** in the districts of Hartmannsdorf, Pohlitz, Gleina and Reichardtshausen and in the Municipality of Caaschwitz. The programme of action also addresses accessibility in the mobility sector, e.g. improving bus stops to make them disabled-friendly and barrier free.

Sustainable mobility is also being promoted within the **administration of the Municipality of Bad Köstritz**. The following operational objective is enshrined in the Sustainable Development Strategy's programme of action, for example: To lower CO₂ emissions in respect of the administration's mobility requirements, preference is to be given to environmentally friendly modes of transport (service e-bike, cargo bike, electric car, official travel with public transport). Ambitious emissions limits apply to the procurement of service vehicles. Consequently, electric vehicles and/or pedelecs are to be procured for use by the administration as service vehicles and/or service bicycles. The municipal authorities aim to be a role model in respect of the use of electromobility.

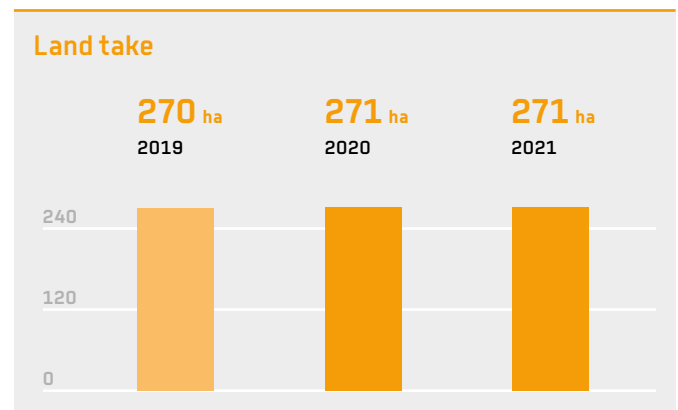
3.4.4 Indicators



Land take

Settlement and transport areas as a proportion of total area in hectares
(Source: Thuringian Federal State Office of Statistics)

The indicator “land take” measures the percentage share of settlement and transport areas in relation to the total area and, in the context of progressive urbanisation, links up with the objective of avoiding expansion and external development and instead focusing more on efficiency and internal development. Settlement and transport areas are areas that are used for housing, industry and business, for public institutions, sport, leisure and recreation (including cemetery grounds), as well as transport areas. Nationwide, an average of around 54 hectares was newly developed for settlement and transport purposes in the years 2017 to 2020. This development is however far beyond the national objective given in the “Integrated Environmental Programme 2030” of Germany’s Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) which aims to limit land take to 20



hectares a day by the year 2030. In the Municipality of Bad Köstritz, land take for settlement and transport in the designated period increased from 270 hectares in 2019 to 271 hectares in 2021. An increase of one hectare in total has been recorded for sport, leisure and recreational areas which corresponds to the targeted development in this sector.

11 SUSTAINABLE CITIES AND COMMUNITIES

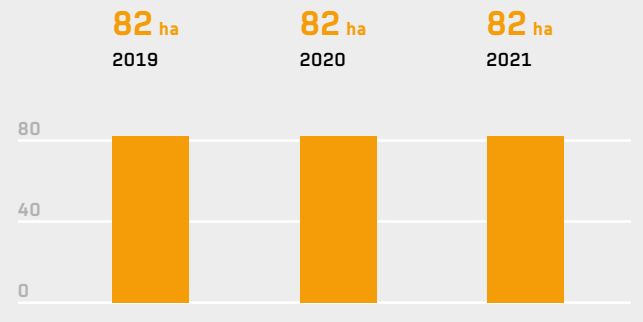


Land take for transport

Proportion of land take for transport in relation to total area
(Source: Thuringian Federal State Office of Statistics)

The indicator “land take for transport” measures the percentage share of settlement and transport areas in relation to the total area and, just like the indicator “land take”, is related in the context of progressive urbanisation to the objective of avoiding expansion and external development and instead focusing more on efficiency and internal development. Land take for transport is land used for roads, railways and air transport. This includes driveways, rest areas, markets and pedestrian areas as well as railway buildings and airport terminals. It is thus about land that has been sealed for transport purposes, but also about attendant landscaping measures. In the past four-year average, around 8 hectares of new land was taken per day for transport in Germany. The objective of limiting overall land take to 20 hectares per day in all by the year 2030 also applies to the development of land used for transport. The Municipality of Bad Köstritz has been working hard for many years now to minimise its land take, also for transport purposes.

Land take for transport



es. This intention was and is taken into account in all plans concerning roads, open areas and pathways. The upshot: following the realisation of many plans in recent years, land take for transport remains at a consistent 82 hectares. One remarkable aspect here is that the share of land used for road transport which, alongside pathways, public spaces and areas for rail transport is part of the overall transport area, has decreased by one hectare.

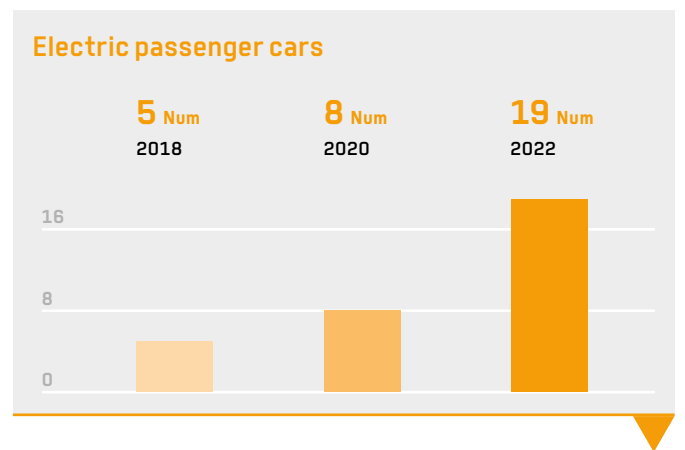
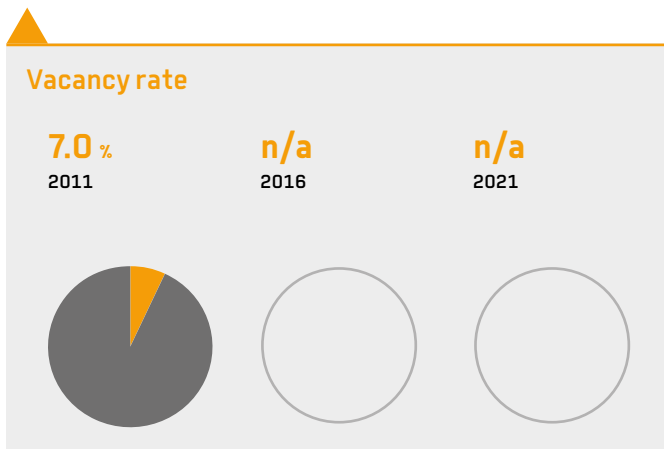


Vacancy rate

Proportion of available rental units in the municipality
(Source: Bad Köstritz, ZENSUS)

Housing is described as “vacant” if it is neither rented out nor inhabited by the proprietor. In recent years, residential vacancies have increasingly taken centre stage in socio-political and urban development debates, especially due to the bottlenecks in the supply of affordable housing as a result of the privatisation and capitalisation of the housing market. It is not just a question of providing sufficient housing however, but also the quality of housing. In 2018, approximate-

ly 8.2 % of housing Germany-wide was vacant (destatis). The Municipality of Bad Köstritz only has figures from the year 2011: 7.0 per cent of housing was vacant at that point in time, a large proportion in apartment blocks. Roughly speaking, this figure matches Thuringia’s average of 6.8 per cent. The lack of more recent data rules out any comparison with developments nationwide.



Electric passenger cars
Number of registered EVs, not including hybrids
(Source: Vehicle Registration Service, Administrative District of Greiz).



Responsible for around 20 per cent of all greenhouse gas emissions (GHG) in Germany, the transport sector is the only one that has not been able to reduce its GHGs in the past ten to twenty years. Seen in this light, electrification of the road transport sector is a key factor for achieving the climate goals. In turn, the scale-up of electromobility necessitates a consumer-friendly and reliable charging structure. The indicator concerns the number of registered EVs, not

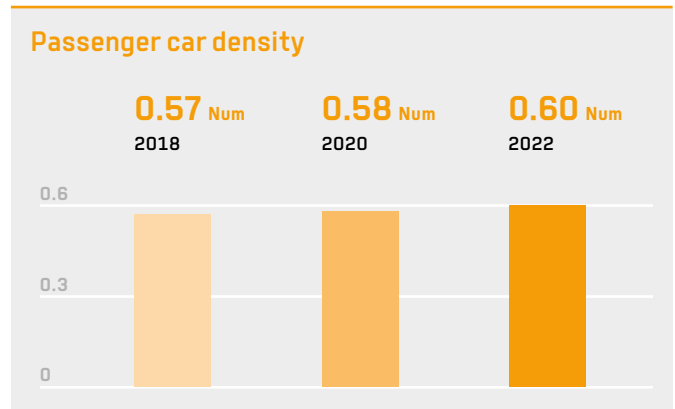
including hybrids. The increase in EV registrations in the period from 2018 to 2022 is to be regarded as positive. On the one hand, the environmental awareness of the inhabitants is a factor and, on the other, the increase in fuel prices in recent years. Private charging infrastructure is also growing in parallel to the increase in EVs. A corresponding public charging infrastructure is also on hand in Bad Köstritz.



Passenger car density

Number of passenger cars per inhabitant
(Source: Thuringian Federal State Office of Statistics, Municipality of Bad Köstritz)

Motorised private transport shapes the use of land, the consumption of non-renewable resources, the emission of climate-noxious and health-damaging exhaust gases and noise pollution. Nationwide, however, the number of passenger vehicles has continued to increase for years - with far-reaching, social, economic and environmental impacts. Furthermore, the ongoing expansion of the mobility infrastructure for motorised individual transport (MIT) translates into a higher density of vehicles, leading to a negative loop. Noise pollution and contamination loads caused by transport constitute a health hazard, especially for people in densely populated areas. Resource and energy-intensive production, maintenance and disposal all make for high environmental impacts. The indicator provides information about the number of passenger cars per person in the Municipality of Bad Köstritz. In the period under review, vehicle density



increased slightly. These calculations are based on vehicle registration data, irrespective of type of fuel and/or source of energy (petrol, diesel, natural gas, electric, etc.). The additional indicator electric passenger cars (see below) shows that the number of registered electric vehicles increased in the period under review.



3.5 SDG 17 - Partnerships for the Goals

3.5.1 SDG 17 - Introduction and relevance for German municipalities

SDG 17 calls on the world to strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development, with respect to all the SDGs. These can only be achieved through strong partnerships at multiple levels. Politics, civil society, academia and business must work together to implement the goals - locally, regionally, nationally and globally. This means that multi-actor partnerships between public, private and civil society partners are key. The core principle of “leave no one behind” describes the special responsibility to include all people on the path to sustainable development. In particular, the needs of the poorest and most disadvantaged should be taken into account -

both within a society and in the context of the global community. Accordingly, the 2030 Agenda calls for the countries of the Global North to support the countries of the Global South, e.g. in capacity building for sustainable development.¹⁵ For German municipalities, the following themes are therefore especially relevant for implementing this SDG (please also compare these with the targets for SDG 17 in the annex):

- Forming and supporting partnerships and cooperation arrangements
- Promoting global justice
- Implementing local development policy and cooperation.

¹⁵ See Germany's Voluntary National Review to the High-Level Political Forum 2021 and the German Sustainable Development Strategy 2021.



3.5.2 Overview of qualitative aspects and indicators

Qualitative aspects:

- Global justice - Engaging in Fairtrade
- Sustainability partnership with the Municipality of Huamantla, Mexico
- Other cooperation and networks

Indicators:

- Ongoing Fairtrade certification

3.5.3 Contributions of the Municipality of Bad Köstritz to the SDG

Global justice - Engaging in Fairtrade

As a Municipality for Global Sustainability, the Municipality of Bad Köstritz attaches special importance to supporting global justice. Against this backdrop, the municipal council meeting in March 2021 voted in favour of applying to become a **Fairtrade Town**. To this end, a "Fairtrade Town" steering group was set up in the summer of 2021 with local retailers, the hospitality sector, schools, children's nurseries, churches, the One World network and the municipal administration. Measures are currently being coordinated for the rollout of Fairtrade in the municipality. Certification of the Municipality of Bad Köstritz as a Fairtrade Town is planned for 2023. A corresponding application for certification was submitted at the end of March 2023. This means that, alongside some much

Photo 30: The steering group FairTrade Town has formed in the city © Stadt Bad Köstritz



larger towns, Bad Köstritz is set to become the 14th Fairtrade Town in the federal state of Thuringia. In this context, Fairtrade is to be established in the municipality's various institutions and education work conducted on global justice, especially for children and youth. These inputs will be accompanied by outreach events (one example is the Fair Flowers Exhibition of 2021 as part of the nationwide Fair Week). The Fairtrade Town campaign is driving the qualitative upgrading needed for fair and sustainable municipal engagement. Building on the 2030 Agenda, a Fairtrade Town embraces its global responsibility and thus its role model function for its citizens. The Sustainable Development Strategy's programme of action lists the following measures in this context: educating people about fair consumption and local support for regional suppliers of fair products from the region.

Municipalities in Germany have been able to apply for Fairtrade Town status since 2009. Fairtrade Towns support Fairtrade at the local level and are the result of successful networking by actors from civil society, politics and business who join together to promote Fairtrade locally. The Fairtrade seal identifies products that meet social, environmental and economic production standards. Fairtrade is thus a holistic approach that aims to sustainably improve the living conditions of small farmers as well as employees in the Global South. The campaign Fair Trade Towns International is supported in Germany by *Fairtrade Deutschland e.V.* Worldwide there are more than 2,000 Fairtrade towns in over 36 countries. In Germany, more than 800 municipalities are already certified as Fairtrade Towns and together they form a network.

To be certified as a Fairtrade Town, it is necessary to satisfy the following five Fairtrade criteria at various local levels:

- The municipality must adopt a council resolution concerning participation in the Fairtrade campaign and work towards certification as a Fairtrade Town. Fairtrade products must be used in all

council meetings and committees and also in the mayor's office. The goal is to use Fairtrade products at local events too.

- A steering group has to be set up in the municipality to coordinate local activities required to achieve certification as a Fairtrade Town and beyond. This group consists of representatives from civil society, politics and business. The steering group coordinates local Fairtrade activities. As the driving force behind this engagement, the group networks actors within the municipality and fosters dialogue between the political arena, business and citizens. The steering group's core tasks include: meeting the criteria needed to qualify as a Fairtrade Town, prioritising Fairtrade topics in the municipality, coordinating and organising education and outreach work and ensuring information sharing between all stakeholders.
- Fairtrade products are offered in local retail businesses and in cafés and restaurants.
- Educational inputs on the topic of Fairtrade are delivered in public institutions, such as schools, clubs and churches; Fairtrade products are also used.
- Local media report on the topic of Fairtrade. The steering group promotes corresponding outreach work in the municipality.

On compliance with the criteria and following evaluation by *Fairtrade Deutschland e.V.* the title of Fairtrade Town is awarded for two years. At the end of this two-year period, the title can be renewed by means of recertification. To this end, the municipality must provide proof of its continued compliance with the criteria.

Besides municipalities, schools and children's day-care centres can also apply for certification as fair institutions. This involves mainstreaming the topic of Fairtrade in the respective institutions and fostering awareness of global justice. Against this backdrop, the objective of the first **Fair Kita** (fair kindergarten) was launched in the Municipality of Bad Köstritz in 2022. To this end, a close dialogue was organised between the mayor, the Coordinator for Mu-

municipal Development Policy, the district association of the *Arbeiterwohlfahrt Greiz* (Workers' Welfare Federal Association, Greiz), the regional promoter of the One World House Jena and the Bad Köstritz children's daycare centre *Bummi*. This dialogue served to map out the route to a fair kindergarten. The aim is not only to achieve certification but to get all stakeholders on board, including the staff, parents' representatives and, of course, the children. The One World House offers extensive support to help make the topic of Fairtrade an integral part of daily life. Adult education is another important aspect when it comes to raising awareness of this global topic. It was agreed that, in addition to Fairtrade, the use of regional products should also play a major role. Achieving a balance between the two is a key objective in terms of future supplies for the daycare facility. In future, the topic of Fairtrade will also be an integral component of the syllabus for the cohorts of all years in Bad Köstritz's Secondary School.

Photo 31: Fair roses - every year on International Women's Day for the ladies of the Bad Köstritz town council © Stadt Bad Köstritz



As part of its role model function, the municipal administration of Bad Köstritz is leading the way and thus also promoting Fairtrade. The resolution of Bad Köstritz's municipal council concerning the Sustainable Development Strategy prioritises the **introduction of fair procurement in the municipal administration**. Fair procurement essentially means trade partnerships are built on dialogue, transparency and respect, and strive for greater justice. By improving trade conditions and ensuring social rights - especially in countries of the Global South - Fairtrade is contributing to sustainable development. To implement the municipal council resolution, the Municipality of Bad Köstritz has analysed its current procurement practices. At the same time, it is exploring the possibility of environmentally fair procurement for various product groups within existing administrative regulations and the current legal framework. These steps are anchored accordingly in the Sustainable Development Strategy's programme of action (baseline survey of municipal procurement; systematic implementation of environmentally fair procurement options by product groups). As a result, substituting items used to date with certified,

eco-Fairtrade goods will play an increasingly greater role in future orders and tenders. Numerous real-life examples show that, in public commissions, economics and environmental protection go hand in hand and that the terms and conditions can certainly be attractive. Sharing lessons learned with other municipalities will also be important when selecting products and services, as will participation in various network meetings and further training measures on fair procurement at the national and regional level. Training in fair procurement for local government staff has also been integrated into the Sustainable Development Strategy's programme of action.

Furthermore, the Municipality of Bad Köstritz has signed the **resolution "Municipalities for a Strong Supply Chain Law"**, which aims to make global supply chains more sustainable. Backed by 74 municipalities with a total of around 10 million inhabitants, this resolution has been sent to members of the German Bundestag. With this resolution, the municipal actors are embracing the fundamental demands of the "Supply Chain Law Initiative" by calling for preventive due diligence and liability regulations to be at the core of an effective supply chain law, along with effective state implementation mechanisms. The German Bundestag adopted the new Supply Chain Act mid-2021. The Act on Corporate Due Diligence Obligations in Supply Chains (*Lieferkettensorgfaltspflichtengesetz, LkSG*) obliges German companies to ensure better compliance in terms of their global responsibility to respect human rights and environmental standards. With this Act, the German Government is thus acknowledging its duty as a state to protect human rights along global supply chains.

Sustainability partnership with the Municipality of Huamantla, Mexico

The Municipality of Bad Köstritz has been closely engaged in a strong partnership with the Mexican Municipality of Huamantla since 2019. Huamantla lies in the east of the federal state of Tlaxcala in Central Mexico and has around 100,000 inhabitants. It is known for its cultural diversity and traditions. The two municipalities established contact through the collaborative efforts that were already ongoing between the Mexican Dahlia Society and the Dahlia Centre in Bad Köstritz. Building a municipal partnership is thus enshrined accordingly in the programme of action for Bad Köstritz's Sustainable Development Strategy. This includes an array of objectives and measures, such as reciprocal visits by delegations, an inventory of the partner municipality's needs, knowledge transfer on the topics of sustainable development, PR events to raise public awareness and the implementation of joint projects in both countries.

The exchange has become more intensive in recent years and is supported by an ongoing range of activities. The partnership was established as part of the project **"Municipal Partnerships for Sustainability"**, which is delivered by Engagement Global's Service Agency Communities in One World, and funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). In this project, municipalities work together strategically and across departments to implement the 2030 Agenda at the local level. To this end, over a two-year period, around ten sustainability partnerships - each consisting of a German municipality and a municipality from the Global South - are advised and supported. The municipalities apply and grow their local governance expertise in the process, and jointly execute activities to localise the Sustainable Development Goals. Their international dialogue opens up new prospects for both sides, making them more aware of the global impact of local action. Planning and implementing activities and learning from each other are experiences



Photo 32: During the visit of the Mexican delegation in Bad Köstritz, a dahlia variety was named "Magic Huamantla" © Stadt Bad Köstritz

that are enriching at a professional but also at a personal level. 2020 saw the launch of a project phase with a total of eleven partnerships between German and Latin American municipalities.

The aspect of sustainability is particularly prevalent in the partnership between Bad Köstritz and Huamantla. The focus here is on the two topics of biodiversity/conservation of natural resources and education (see concrete activities below). In the meantime, in the regular **exchange formats** organised at least once a month via video conferences, topical issues are discussed together with local government officials, schools, kindergarten, companies, churches, associations and the One World House Jena. What is more, **PR work** is conducted regularly within the municipal administration and the council, in the press, on the municipality's website (in some cases in two languages), in social networks and by means of public display boards. Reciprocal **visits by delegations** to Bad Köstritz and Huamantla are also being organ-

ised. The wide-ranging agendas during the roughly one-week visits to Bad Köstritz and Huamantla respectively cover various locations and many different aspects of cooperation under the 2030 Agenda. For example, a lot of the locations visited have to do with the topic of sustainability, including dahlia cultivation and recycling centres as well as sites promoting climate action and renewable energy. Below are details of some concrete partnership activities by the two municipalities.

Within the scope of the COVID-19 pandemic, Bad Köstritz supported its partner municipality with a **Coronavirus Solidarity Package**. Mid-2021, the Mexican Health Ministry officially handed over the solidarity package to Huamantla General Hospital. To facilitate this package, the Municipality of Bad Köstritz leveraged an aid fund and requested corresponding financial resources - around EUR 48,000 - from the German Federal Ministry for Economic Cooperation and

Development (BMZ) via Engagement Global gGmbH. The money was used to procure 40 oxygen concentrators to treat COVID-19 patients. The equipment's hand-over was accompanied by a considerable media presence that drew a great deal of attention to the partnership, especially in Huamantla.

In 2022, **a partnership agreement on the 2030 Agenda was signed** during delegation visits to Bad Köstritz and Huamantla respectively. The agreement of June 2022 in Bad Köstritz was updated through an amendment made in October 2022 in Huamantla. Current and future cooperation is based on a series of topics dealt with in the Sustainable Development Goals (SDGs). In future, many joint projects are planned in the context of implementing the 2030 Agenda.

Various **activities for conserving dahlia biodiversity** have been conducted in recent years - in keeping with the topic of biological diversity. The dahlia is a

Photo 33: Dahlias are the symbol of the cities Huamantla and Bad Köstritz © Stadt Bad Köstritz



connecting link between Bad Köstritz and Huamantla. While Mexico is the flower’s country of origin, the Municipality of Bad Köstritz is considered one of the cradles of German dahlia cultivation and the home of some internationally leading breeders whose successful work culminated in the foundation of the Bad Köstritz Dahlia Centre, leading to its present-day reputation and current activities. This cultural and historical institution in the Municipality of Bad Köstritz was opened in 2007 as an official side-event to the National Garden Show (Bundesgartenschau) in Gera and Ronneburg. The Dahlia Centre in Bad Köstritz and the Mexican Dahlia Society have maintained close links for many years. In both Bad Köstritz and Huamantla, the dahlia flowering period is leveraged for tourism and business purposes. According to the President of the Mexican Dahlia Society, some 41 species are at risk of extinction. Joint research by the Mexican Dahlia Society with universities and botanical gardens is endeavouring to prevent this from happening. Also at the forefront of these efforts is the pesticide-free, organic and fair cultivation of dahlia tubers for nutritional and medicinal purposes. Moreover, extensive information and education campaigns are also targeting the population at large. For example, a Dahlia cooking book published in Bad Köstritz was translated into Spanish for distribution in Mexico. In 2022, the Dahlia Centre in Bad Köstritz presented the topics featured in dahlia-related cooperation with Huamantla - such as fair cultivation, education, biodiversity, use of dahlia tubers for nutritional and medical purposes - on instructional display boards. The presentations were in two languages (German and Spanish) and showcased the links to the respective goals of the 2030 Agenda. A focus of further cooperation in 2023 is on the **construction of a greenhouse complex for dahlia growing** in Huamantla. Plant cultivation under greenhouse conditions is a social project in Huamantla which primarily aims to provide work for the indigenous population. The project is eligible for support from a small project fund delivered by Engagement Global’s Service Agency Communities in One World. Above all, it is intended to educate socially deprived youth and to reduce unemployment in the Municipality of Huamantla. The

Photo 34: Dahlias are the symbol of the cities Huamantla and Bad Köstritz © Stadt Bad Köstritz





Photo 35: The stakeholders of the Municipal Sustainability Partnership Bad Köstritz - Huamantla present their action plan for further cooperation at the final conference in San José (Costa Rica) © Stadt Bad Köstritz

greenhouse is scheduled to cover a surface area of some 200 m². It is planned, amongst other things, to set up an irrigation system that is fed by a newly built rainwater cistern and a new PV-powered electricity supply system for ventilation and cooling. This project involves expert exchanges in digital and in-person formats.

With regard to education, there are plans to **create a school partnership** between Bad Köstritz Secondary School (self-organised learning) and Huamantla High School CBTis No. 61 by the year 2024. The heads of the two schools have already held initial talks. The school partnership is to be established under the Service Agency's ENSA programme. ENSA, which is a German acronym for "school exchange for development", offers educational programmes and provides



Photo 36: The topics of the municipal sustainability partnership between Huamantla and Bad Köstritz are publicly presented on display boards in the Dahlia Center Bad Köstritz © Stadt Bad Köstritz

funding for school partnerships. The programme aims to enable people to experience global relationships first-hand and supports partnerships between schools from Germany and countries of the Global South. These school partnerships allow students to share their different perspectives and learn from each other while forming an understanding of global connections and committing to sustainable change. The focus is therefore on topics such as social justice, human rights and diversity, etc. The schools are helped to develop a long-term plan for their partnership so that it become sustainable.

With regard to the repatriation of cultural property, the Municipality of Bad Köstritz is also supporting the **return of two fragments of the Codex of Huamantla** from the 16th century. In its entirety, the Codex depicts a large geographical region of the federal state of Tlaxcala. Two original fragments of the Codex of Huamantla are currently archived in Berlin's State

Library, having been purchased by Alexander von Humboldt in 1806 and later donated to the library. Together with the authorities in Mexico, the Municipality of Bad Köstritz is endeavouring to secure the repatriation of these important historic documents to their country of origin. During the 2022 visit to Huamantla by the delegation from Bad Köstritz, the municipal museum officially inaugurated a large-scale copy of the Codex of Huamantla. This ceremony was attended by representatives of the Ministry of Cultural Affairs for the Federal State of Tlaxcala.

Overall, the partnership between Bad Köstritz and Huamantla involves multi-faceted cooperation on an equal footing that benefits both municipalities enormously in a wide range of different areas. In future, various other topics relating to implementation of the 2030 Agenda will be analysed, prioritised and implemented.

Other cooperation and networks

Partnerships and networks are of central importance for localising the 2030 Agenda's Sustainable Development Goals. The Municipality of Bad Köstritz is thus networking with other municipalities and other stakeholders, such as civil society. **Cooperation by the Municipality of Bad Köstritz with its neighbour municipality Crossen** as part of "Municipalities for Global Sustainability - Thuringia", is another example of a municipal partnership in addition to the extensive network of municipal partnerships under the project "Municipal Partnerships for Sustainability". The two municipalities designed the joint programme of action for the Sustainable Development Strategy in close cooperation.

Furthermore, the Municipality of Bad Köstritz is networking as part of the **regional pressure group**

Photo 37: In July 2021, 40 oxygen concentrators were handed over by the city of Bad Köstritz to Huamantla General Hospital as part of the Corona Solidarity Package supported by Engagement Global © Stadt Bad Köstritz



Saale-Holzland e.V. which forms part of the **Saale-Holzland LEADER region**. The regional pressure group Saale-Holzland currently has 75 members. These stakeholders are from cities and municipalities, businesses, clubs and associations, but also include private individuals. LEADER is a European Union programme that fosters innovative activities in rural areas.

The above-mentioned **Fairtrade Town steering group** is an example of networking with other actors. It provides a framework for an intensive exchange with actors from the retail and hospitality sectors, schools, kindergartens, clubs and societies, the Church and the One World network. The **steering group for the "Municipalities for Global Sustainability - Thuringia"** has actors from many different fields of society (see section on "Strategic and Organisational Mainstreaming of Sustainability").

Photo 38: The Mexican delegation informs itself about the cultivation of dahlias in the horticultural company Paul Panzer during its visit in Bad Köstritz.
© Stadt Bad Köstritz





Photo 39: Two fragments of the Huamantla Codex are kept in the Berlin State Library. The municipal administration of Bad Köstritz is trying to have them returned to Mexico. Mayor Oliver Voigt viewed the fragments at an exhibition in Berlin. © Stadt Bad Köstritz



3.5.4 Indicators

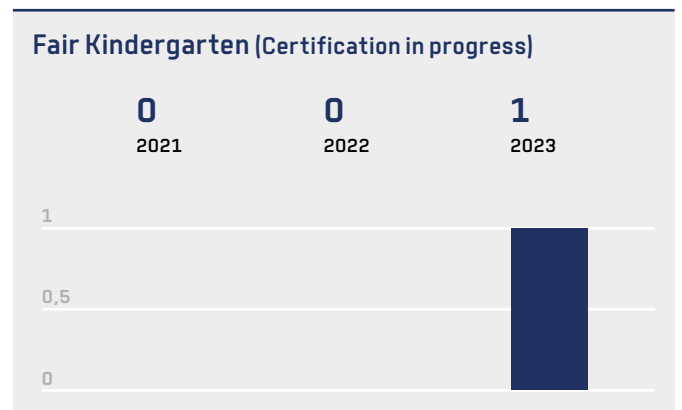
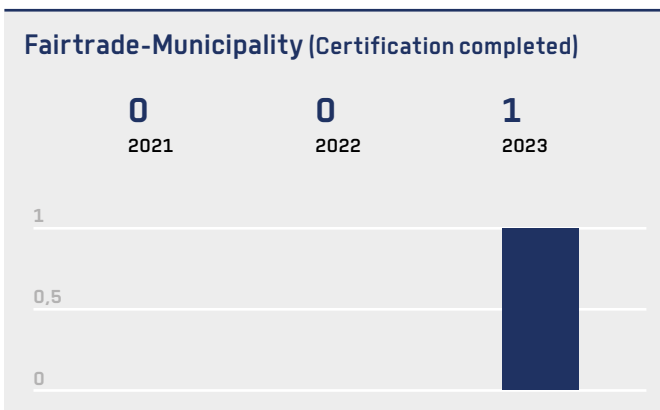


Ongoing Fairtrade certification

Number of ongoing certification processes as a Fairtrade municipality and a FaireKITA (Fair kindergarten) (Source: Municipality of Bad Köstritz)

Fairtrade certification acknowledges engagement for the responsible consumption of Fairtrade products. It networks consumers, companies or organisations and changes trade through better prices for producers, such as smallholder families. Furthermore, it promotes decent working conditions for plantation workers in countries of the Global South. This status can be acquired by administrative districts, municipalities, universities, schools and kindergartens (kitas). The criteria that have to be met

include, for example, the existence of a resolution, a functional project team, existing PR work, the sale of Fairtrade products or the integration of Fairtrade-related topics into the teaching syllabus. This quality mark has to be renewed every two years. The Municipality of Bad Köstritz is currently in the process of being certified as a Fairtrade Town; likewise, the children’s daycare centre has applied to be certified as a FaireKITA (fair kindergarten).





04

4 Outlook



Photo 40: Town view of Bad Köstritz with Heinrich Schütz House, Palace and Hotel Goldner Loewe © Stadt Bad Köstritz

This Voluntary Local Review (VLR) takes a comprehensive look at the implementation status of the Sustainable Development Goals (SDGs) in the Municipality of Bad Köstritz, in both qualitative terms (setting out activities to foster sustainability) and in quantitative terms (analysing indicators). The presentation of the individual SDG-related activities and indicators demonstrates the important contribution Bad Köstritz is making to realising the 2030 Agenda at local level. While local reporting on sustainability in Germany has often focused more on quantitative indicators to date, this VLR aims to take a holistic approach to presenting local sustainability. It thus illustrates how the global framework of reference provided by the 2030 Agenda can be localised in both qualitative and quantitative terms to help achieve the SDGs.

This our first VLR is at the same time the first Sustainable Development Report issued by the Municipality of Bad Köstritz. It is intended to be the starting point for the consolidation and mainstreaming of sustainability reporting in the years ahead. Reporting is thus to be seen as an ongoing process in which the results



achieved to date serve as the basis for further reporting. In addition to activities relating specifically to SDGs 6, 7, 9, 11 and 17, the Municipality of Bad Köstritz is undertaking various other activities that contribute to the remaining SDGs (for more information, see the visions and strategic thematic areas of education and demographics as well as natural resources and the environment in the section "Strategic and Organisational Mainstreaming of Sustainability"). By way of example, this includes measures that promote biological diversity, e.g. planting of flowering meadows. Using this as a foundation, the VLR can be expanded in future to cover all 17 of the Sustainability Development Goals and thus present the efforts of the Municipality of Bad Köstritz in full.

Essentially this international sustainability report has three distinct purposes. Firstly it allows us to reflect on progress made towards achieving sustainable development. Central activities (strategies and concepts to guide actions, measures, projects, political decisions, specific objectives, cooperation arrangements and networks, and organisational structures) can be presented together, developments rendered tangible with the help of indicators, and action required identified. Secondly, reporting helps communicate information about the sustainability status quo at local level to policy-makers and interested parties, establishing transparency and generating more attention. Finally, reporting is a central steering element in the ongoing cycle of local sustainability management and for the future alignment of local planning. The degree of objectives achievement can be considered, mechanisms set in course where objectives were not attained, and new priorities set in the interests of continually improving action.

This VLR is part of the ever-growing, worldwide VLR reporting movement, and indicates that municipalities can play a key part in realising the 2030 Agenda. Local contributions were found to all SDGs addressed. The contributions presented here cover several of the 169 targets. In this regard the VLR supports the assumption found in much literature that at least 65

per cent of the SDG targets will only be achieved if municipalities are consistently involved in implementation and monitoring (see Introduction). The VLR report offers huge potential to supplement national and regional reporting to the UN High-Level Political Forum for Sustainable Development, by adding the dimension of local practical experience. For the successful implementation of the 2030 Agenda, it is crucially important that the various levels (international, national, regional, local) be dovetailed. This VLR has been drawn up with five others under the auspices of a Germany-wide process. This fosters inter-municipal exchange in Germany, and worldwide, on various aspects of reporting (e.g. regarding procedures and structures) as well as encouraging mutual learning through innovative beacon projects.

This VLR is part of the ever-growing, worldwide VLR reporting movement, and indicates that municipalities can play a key part in realising the 2030 Agenda. Local contributions were found to all SDGs addressed. The contributions presented here cover most of the 169 targets. In this regard the VLR supports the assumption found in much literature that at least 65 per cent of the SDG targets will only be achieved if municipalities are consistently involved in implementation and monitoring (see Introduction). The VLR report offers huge potential to supplement national and regional reporting to the UN High-Level Political Forum for Sustainable Development, by adding the dimension of local practical experience. For the successful implementation of the 2030 Agenda, it is crucially important that the various levels (international, national, regional, local) be dovetailed. This VLR has been drawn up with five others under the auspices of a Germany-wide process. This fosters inter-municipal exchange in Germany, and worldwide, on various aspects of reporting (e.g. regarding procedures and structures) as well as encouraging mutual learning through innovative beacon projects.

Accordingly, the Municipality of Bad Köstritz plans to rigorously continue along the path it has chosen to achieve greater sustainability in the years to come. At the heart of these efforts lies the implementa-

tion of the objectives and measures specified in the Sustainable Development Strategy's programme of action (see also the section "Strategic and Organisational Mainstreaming of Sustainability"). Outlined below are a number of examples of central steps to be taken in the near future to promote sustainability in the Municipality of Bad Köstritz:

- Further elaboration, updating and finalisation of next steps in the Sustainable Development Strategy's programme of action
- Further prioritisation of cooperation projects with the Mexican Municipality of Huamantla
- Certification as a Fairtrade Town
- Making the position of Coordinator for Municipal Development Policy permanent to some extent.





05

5 Annex

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5.1 Summary of the 169 SDG targets (adapted)

SDG 1 - End poverty in all its forms everywhere

- 1.1 Eradicate extreme poverty
- 1.2 Reduce relative poverty
- 1.3 Implement social protection systems and measures, achieve substantial coverage of the poor and vulnerable
- 1.4 Equal rights to economic and other resources (access to basic services)
- 1.5 Build resilience of poor people (to environmental, economic and social shocks/disasters)
- 1.a Ensure mobilisation of resources for developing countries to implement programmes /policies to end poverty
- 1.b Create policy frameworks at regional, national and international levels to eradicate poverty.

SDG 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture

- 2.1 End hunger, ensure access to food
- 2.2 End all forms of malnutrition
- 2.3 Double agricultural productivity and incomes of small-scale food producers
- 2.4 Ensure sustainable food production and implementation of resilient agricultural practices
- 2.5 Maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals (and their related wild species)
- 2.a Investment to enhance agricultural productive capacity in developing countries
- 2.b Correct and prevent trade restrictions and distortions in world agricultural markets
- 2.c Adopt measures to ensure the proper functioning of food commodity markets and facilitate access to market information

SDG 3 - Ensure healthy lives and promote well-being for all at all ages

- 3.1 Reduce maternal mortality
- 3.2 Reduce neonatal and infant mortality
- 3.3 Combat communicable diseases
- 3.4 Reduce premature mortality from non-communicable diseases, promote mental health and well-being
- 3.5 Strengthen prevention and treatment of substance abuse
- 3.6 Halve the number of global deaths and injuries from road traffic accidents
- 3.7 Ensure access to sexual/reproductive health care (family planning, information and education)

- 3.8 Achieve universal health coverage / access to health-care services and essential medicines/vaccines for all
- 3.9 Reduce deaths and illnesses from chemicals and pollution of environmental assets
- 3.a Strengthen the WHO Framework Convention on Tobacco Control
- 3.b Support research and development and access to vaccines and medicines (developing countries)
- 3.c Increase health financing / education and training of the health workforces in developing countries
- 3.d Strengthen early warning, risk reduction and management of national and global health risks

SDG 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- 4.1 Ensure completion of free and quality education for all children
- 4.2 Ensure access to quality early childhood education and care
- 4.3 Ensure access to affordable and quality technical, vocational and tertiary education
- 4.4 Ensure sufficient skills for employment, decent jobs and entrepreneurship
- 4.5 Ensure equal opportunities and equal access to all levels of education and training
- 4.6 Minimise the number of illiterates
- 4.7 Improve knowledge and skills to promote sustainable development (learners - ESD)
- 4.a Build and upgrade safe, inclusive and effective education facilities that are child-, disability- and gender-sensitive
- 4.b b Increase the number of scholarships available to developing countries for enrolment in higher education
- 4.c Increase the supply of qualified teachers in developing countries

SDG 5 - Achieve gender equality and empower all women and girls

- 5.1 End discrimination against women/girls
- 5.2 Eliminate violence against women/girls
- 5.3 Eliminate child, early and forced marriage, and female genital mutilation
- 5.4 Recognise and value unpaid care and domestic work (promote shared responsibility within the household and family)
- 5.5 Ensure participation and equal opportunities for women in leadership roles at all levels
- 5.6 Ensure access to sexual and reproductive health and rights
- 5.a Undertake reforms to give women equal rights to economic and other resources
- 5.b Enhance the use of enabling technologies to promote the empowerment of women
- 5.c Strengthen sound policies/legislation for gender equality and the empowerment of women

SDG 6 - Ensure availability and sustainable management of water and sanitation for all

- 6.1 Achieve access to safe and affordable drinking water for all
- 6.2 Achieve access to adequate sanitation and hygiene for all
- 6.3 Improve water quality
- 6.4 Increase water use efficiency, reduce water scarcity
- 6.5 Implement integrated water resources management
- 6.6 Protect and restore water-related ecosystems (mountains, forests, wetlands, rivers, aquifers and lakes)
 - 6.a Expand international cooperation and support for developing countries in the area of water and sanitation
 - 6.b b Strengthen the participation of local communities in sustainable water management and sanitation

SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all

- 7.1 Ensure access to affordable, reliable and modern energy services
- 7.2 Increase the share of renewable energy
- 7.3 Increase energy efficiency
 - 7.a Enhance international cooperation to facilitate access to clean energy research and technology
 - 7.b Expand infrastructure/upgrade technology in developing countries for supplying sustainable energy services

SDG 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.1 Sustain per capita economic growth (GDP)
- 8.2 Achieve higher levels of economic productivity through diversification, modernisation and innovation
- 8.3 Promote development-oriented policies that support / create decent jobs, entrepreneurship and innovation (small businesses)
- 8.4 Improve resource efficiency in consumption & production, endeavour to decouple economic growth from environmental degradation
- 8.5 Achieve full and productive employment and decent work for all (including women and men with disabilities) as well as equal pay for work of equal value
- 8.6 Reduce the proportion of youth not in employment, education or training
- 8.7 Take measures to eradicate forced and child labour, slavery and human trafficking
- 8.8 Protect labour rights and promote safe working environments
- 8.9 Devise and implement policies to promote sustainable tourism
- 8.10 Strengthen the capacity of domestic financial institutions to expand access to financial/ insurance services
 - 8.a Increase Aid for Trade support for developing countries
 - 8.b Develop a global strategy for youth employment and implement the Global Jobs Pact

SDG 9 - Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

- 9.1 Develop resilient and sustainable infrastructure to support economic development and human well-being
- 9.2 Promote sustainable industrialisation and increase industry's share of employment and GDP
- 9.3 Increase the access of small-scale industrial and other enterprises to financial services
- 9.4 Upgrade infrastructure and retrofit industries to make them sustainable
- 9.5 Enhance research and upgrade the technological capability of industrial sectors
- 9.a Facilitate sustainable infrastructure development in developing countries
- 9.b Support domestic technology development, research and innovation in developing countries
- 9.c Increase access to information and communications technology and provide access to the Internet

SDG 10 - Reduce inequality within and among countries

- 10.1 Achieve income growth among the poorest
- 10.2 Empower and promote the inclusion of all
- 10.3 Ensure equal opportunity and reduce inequalities
- 10.4 Adopt policies for greater equality (wage policy, social protection)
- 10.5 Improve regulation and monitoring of global financial markets and institutions
- 10.6 Strengthen the voice of developing countries in decision-making in global economic and financial institutions
- 10.7 Facilitate orderly and safe migration and mobility, implement well-managed migration policies
- 10.a Implement the principle of special and differential treatment for developing countries (in accordance with WHO agreements)
- 10.b Encourage official development assistance and financial flows to developing countries
- 10.c Reduce transaction costs for migrant remittances

SDG 11 - Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.1 Ensure access for all to affordable, safe and adequate housing and basic services
- 11.2 Provide access to sustainable transport systems for all, improve road safety
- 11.3 Enhance sustainable urbanisation, implement participatory, integrated sustainable settlement planning and management
- 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage
- 11.5 Improve disaster risk management
- 11.6 Reduce the environmental impact of cities (air quality, waste)
- 11.7 Provide universal access to green and public spaces
- 11.a Support economic, social and environmental links between cities and rural communities by strengthening national and regional development

- 11.b Adopt and implement integrated policies and plans for sustainable urban development (inclusion, resource efficiency, climate change mitigation, adaptation and holistic disaster risk management)
- 11.c Support developing countries in building sustainable and resilient buildings

SDG 12 - Ensure sustainable consumption and production patterns

- 12.1 Implement measures for sustainable consumption and production patterns
- 12.2 Achieve sustainable management and use of natural resources
- 12.3 Halve food waste and reduce food losses
- 12.4 Achieve the environmentally sound management of waste and chemicals
- 12.5 Reduce waste generation
- 12.6 Encourage companies to adopt sustainable practices and reporting
- 12.7 Promote sustainable public procurement
- 12.8 Ensure that people everywhere have the relevant information and awareness for sustainable development
- 12.a Support developing countries in moving towards sustainable patterns of consumption and production
- 12.b Develop and implement tools to monitor the impacts of sustainable tourism
- 12.c Reduce fossil fuel subsidies, taking into account the specific needs of developing countries

SDG 13 - Take urgent action to combat climate change and its impacts

- 13.1 Strengthen resilience and adaptive capacity to climate change
- 13.2 Integrate climate measures into national policies
- 13.3 Improve education and human and institutional capacity on climate change mitigation and adaptation
- 13.a Provide financial support for climate action in developing countries
- 13.b Raise capacity for climate change-related planning and management in developing countries



SDG 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development

- 14.1 Reduce marine pollution
- 14.2 Sustainably manage and protect marine and coastal ecosystems
- 14.3 Reduce ocean acidification and address the impacts
- 14.4 Implement sustainable fishing mechanisms
- 14.5 Contribute to the conservation of coastal and marine areas
- 14.6 Prohibit forms of fisheries subsidies that lead to overcapacity and illegal fishing
- 14.7 Increase economic benefits for developing countries through the sustainable use of marine resources
- 14.a Increase scientific knowledge in order to improve ocean health and enhance biodiversity
- 14.b Provide access for small-scale fishers to marine resources and markets
- 14.c Enhance the conservation and sustainable use of the oceans and their resources

SDG 15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- 15.1 Ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems
- 15.2 Promote the sustainable management of all types of forests
- 15.3 Combat desertification and neutralise land degradation
- 15.4 Conserve mountain ecosystems
- 15.5 Reduce the degradation of natural habitats, halt the loss of biodiversity
- 15.6 Promote fair and equitable sharing and appropriate access to genetic resources
- 15.7 End poaching and trafficking of protected species of flora and fauna
- 15.8 Prevent the introduction of invasive alien species
- 15.9 Integrate ecosystem and biodiversity values into local planning/policies
- 15.a Increase financial resources to conserve biodiversity and ecosystems
- 15.b Increase financial resources for sustainable forest management and provide incentives for developing countries to adopt such management
- 15.c Combat poaching and trafficking of protected species

SDG 16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

- 16.1 Reduce violence and related death rates
- 16.2 End violence against children
- 16.3 Ensure equal access to justice
- 16.4 Combat organised crime, reduce illicit financial and arms flows
- 16.5 Reduce corruption
- 16.6 Develop effective, accountable and transparent institutions
- 16.7 Ensure participatory decision-making at all levels
- 16.8 Strengthen the participation of developing countries in the institutions of global governance
- 16.9 Provide legal identity for all
- 16.10 Ensure access to information and protect fundamental freedoms
- 16.a International cooperation: prevent violence and combat terrorism and crime
- 16.b Promote and enforce non-discriminatory laws and policies

SDG 17 - Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development

Finance

- 17.1 Strengthen domestic resource mobilisation to improve domestic tax collection capacity in developing countries
- 17.2 Fulfil ODA commitments
- 17.3 Mobilise additional financial resources for developing countries
- 17.4 Assist developing countries in managing debt
- 17.5 Implement investment promotion regimes for developing countries

Technology

- 17.6 Enhance cooperation for knowledge transfer (North-South) in the field of science, technology and innovation
- 17.7 Promote the development, transfer and dissemination of sustainable technologies in developing countries
- 17.8 Establish systematic cooperation for science, technology and innovation; introduce global technology capacity-building mechanism

Capacity development

- 17.9 Enhance international support for capacity building in developing countries

Trade

- 17.10 Promote an open, equitable and rules-based world trading system
- 17.11 Increase the exports of developing countries
- 17.12 Implement duty/quota-free market access for developing countries

Systemic issues

- 17.13 Enhance global macroeconomic stability
- 17.14 Enhance policy coherence for sustainable development
- 17.15 Respect each country's sovereignty in the implementation of policies for sustainability
- 17.16 Expand global (multi-actor) partnerships for sustainable development
- 17.17 Encourage and promote the formation of public, public-private and civil society partnerships
- 17.18 Enhance capacity-building support for developing countries to increase data availability
- 17.19 Develop measurements of progress on sustainable development, and support statistical capacity-building in developing countries

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