



DIALOG GLOBAL

MUNICIPAL CLIMATE PARTNERSHIPS

DOCUMENTATION OF THE FIFTH PHASE OF THE PROJECT

No. 53

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FOREWORD

Dear readers,

Following the previous four phases, which involved partnerships between German municipalities and municipalities in Africa and Latin America, this fifth phase of the ‘Municipal Climate Partnerships’ project was distinctive in many respects.

First of all the project broadened its horizons. For the first time it focused on Southeast Asia. This enabled the first five municipal climate partnerships between German municipalities and municipalities in the Philippines and Viet Nam to be successfully established.

The major extent to which these countries are affected by the negative impacts of climate change poses particular challenges for the participating municipalities. Their high exposure to increasingly extreme and frequent weather events such as typhoons, torrential rainfall and heat calls for a rapid and direct approach to climate change adaptation that is appropriate to the local situation. At the same time, the extremely dynamic economic and social trends also make adapted measures absolutely essential for an appropriate contribution to climate action.

The climate partnerships of the fifth phase have analysed the situation in the participating municipalities in depth, and in a spirit of friendship have established direct and highly professional cooperation between the municipal partners. All the municipalities taking part have involved a large number of relevant stakeholders in the work of the climate partnerships in order to profit from their manifold expertise, ideas, competencies and experiences. The working structures thus established make the climate partnerships part of the daily routines in their respective municipalities, and build a bridge to the very important civil society engagement that exists in many localities.

The concrete output of the municipal cooperation in the project was the elaboration of the joint programmes of action. In these strategic documents the partnerships identify the joint vision

that they will pursue, what objectives they wish to achieve together in their municipalities, and what concrete steps they will need to take to operationalise their objectives and realise their vision. The range of themes covered encompasses the use of renewable energies for various purposes, water management, agriculture, erosion control and sustainable tourism, as well as the crucially important topic of raising awareness of the global challenges of climate change.

The original target of establishing 50 municipal climate partnerships was reached through the fifth phase of the project. This does not mean that the project will come to an end, however. On the contrary – it marks a new beginning. The lessons learned by the project team at Engagement Global’s Service Agency Communities in One World and the North Rhine-Westphalian Working Party on Agenda 21 (LAG 21 NRW) have been used to further optimise the project concept. The sixth phase of the project, and the soon to be launched seventh phase, will profit directly from this.

The ‘Municipal Climate Partnerships’ project thus intends to continue making its contribution toward achieving the climate change mitigation and adaptation goals agreed in Paris in 2015. The lessons learned in the five project phases to date clearly indicate that jointly developing appropriate measures can generate huge results. Here we are referring not only to the direct results achieved in the field of climate change mitigation and adaptation. We should also mention the many different knock-on effects that also help achieve the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda. For instance, the projects developed and implemented in the climate partnerships train people in various technical and process-related areas (SDG 4), conduct awareness-raising campaigns (SDG 12) or facilitate processes of good governance by involving civil society groups (SDG 16). The climate partnerships themselves can also be seen as a form of multi-stakeholder partnership at the local level, as envisaged by SDG 17. In short, there is barely any SDG that has not already been addressed in

the context of the Municipal Climate Partnerships project.

We hope that reading this documentation, in which the climate partnerships from the fifth phase of the project present their work and results, will motivate and inspire other municipalities to also get involved in this successful project.

We would like to sincerely thank everyone involved for the intensive and productive cooperation and their huge engagement for their respective climate partnerships. We are especially grateful to the mayors and mayoresses of the participating municipalities and the councillors for their political and practical support of the process. And we would particularly like to thank the administrators for bringing their expertise to bear and for taking an open-minded approach to the joint quest for solutions. Last but not least we are also grateful to the civil society actors without whose essential contributions many of the results presented here would not have been possible.

We now look back on an intensive two-year process. Based on the programmes of action developed, we look forward optimistically to the implementation process that is about to begin, and wish all the climate partnerships of the fifth phase huge success and plenty of fun. The Service Agency and LAG 21 NRW will continue to support them in that process in the future.

Yours,



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1. INTRODUCTION

Building on the extensive experience and expertise in climate change mitigation and adaptation at the local level, the ‘Municipal Climate Partnerships’ project aims to strengthen partnerships between German municipalities and municipalities in the Global South in these fields. Municipalities play a pivotal role in various areas of sustainable development in the actual implementation of measures, and in responding directly to their citizens. The project seeks to lend greater weight to this role in the context of development and climate action, and to facilitate inter-municipal expert exchange and the elaboration of specific solutions to local challenges.

To achieve this, the climate partnerships each spend a period of around 24 months developing joint programmes of action for climate change mitigation and adaptation in their two municipalities which specify targets, concrete measures and earmarked resources. Elaborating the programmes of action lays the foundation for long-term, constructive and systematic cooperation between the partner municipalities in these fields. A climate partnership can be based on an existing twinning arrangement, to which it then adds a new dimension. Alternatively it might be established from scratch by two interested municipalities as a theme-based partnership, and then form a starting point for further thematic cooperation activities or a formal partnership.

The project revolves around professional exchange between municipal experts on various specialised topics, especially within the framework of reciprocal missions. The various actors involved bring their technical or organisational expertise to bear, or help make the climate partnership a success by contributing their intercultural and linguistic expertise as well as their experience in international cooperation.

Regular meetings are held to promote networking among the participating municipalities. As well as financial support, the Service Agency and LAG 21 NRW also provide the partnerships with technical and methodological advice. The project is being implemented on behalf of the German Federal

Ministry for Economic Cooperation and Development (BMZ), and is officially supported by Germany’s local authority associations – the German Association of Cities, the German Association of Towns and Municipalities, and the German County Association. The fifth phase of the project was also implemented in cooperation with the Southeast Asia Secretariat (SEAS) of Local Governments for Sustainability (ICLEI). ICLEI helped identify suitable project partners in the Philippines, and helped organise events in Viet Nam and the Philippines. It also supported the German-Philippine partnerships in implementing project activities.

This publication documents the fifth phase of the Municipal Climate Partnerships project, and presents the key results of the work of the partnerships between German and Southeast Asian municipalities.

A total of five municipal climate partnerships took part in the fifth phase of the project.

German municipality	Southeast Asian municipality
Berlin-Lichtenberg	Hoan Kiem (a district of Hanoi), Viet Nam
Ebhausen	Lubang, Philippines
Herdecke	Dumangas, Philippines
Marburg	Muñoz, Philippines
Wernigerode	Hoi An, Viet Nam

The following sections of the introduction explain how the project is organised and structured.

The second section of the documentation is devoted to networking among the partner municipalities. The project aims to network the participating municipalities on various levels. The communication forums provided and supported are first of all described in general terms. This is followed by a brief summary of the key conferences of the project. This includes both the international workshops held at the beginning and end of the project phase, and the network meetings of the German and Southeast Asian municipalities.

The third section contains reports on the individual climate partnerships, and includes details on their background, the process of preparing the joint programmes of action and their respective focal areas of action.

The documentation is then completed with a set of conclusions on the fifth phase of the project, and a look at the future prospects for continued cooperation within the climate partnerships that have now been established.

1.1. General workflow of the project

The aim of the Municipal Climate Partnerships project is the collaborative development, step-by-step implementation and continuous improvement of a joint municipal programme of action for climate change mitigation and adaptation. Starting from strategic objectives, the programme of action is gradually concretised in the form of application-ready measures in conjunction with a detailed planning of resources plus indicators for monitoring the achievement of objectives.

Each programme of action is developed within the respective municipal climate partnership over a period of approximately two years, during which time the municipalities receive intensive advice, support and promotion of bilateral exchange from the Service Agency and LAG 21 NRW. After this phase of intensive development each climate partnership assumes responsibility for self-reliantly implementing and continuously improving its programme of action in the medium to long term.

As described in the manual developed by the Service Agency and LAG 21 NRW, this implementation of the programme takes place in three broad steps:

The first step involves establishing the climate partnership in both partner municipalities. To enable the climate partnership to incorporate a large number of relevant actors in its working structures, comprehensive information work is required. This lays the foundations for organisation and communication in the climate partnership. These steps begin once both partners have agreed to take part in the project with the first network meeting of the German municipalities, and end approximately six months later, when the relevant actors have commenced their work in the climate partnership. The milestones here are the

international kick-off workshop and the first mission phase for the municipal experts.

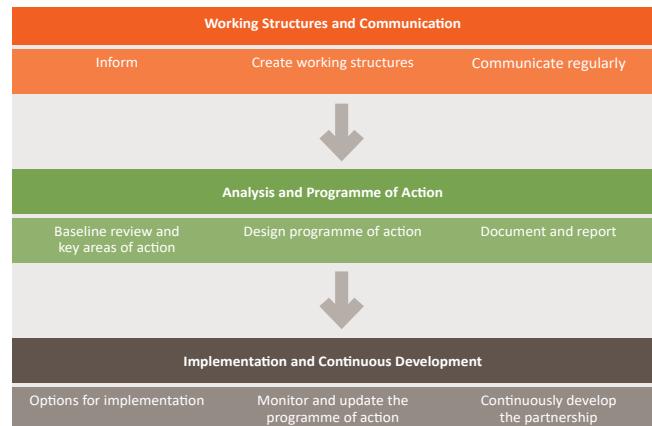


Figure 1: Steps of work in the Municipal Climate Partnerships project
© LAG 21 NRW/SKEW

The second network meeting of the German municipalities marks the beginning of the process of developing the programmes of action. This process involves the partners discussing and agreeing on the key areas of action, objectives, measures and resources in the climate partnership. For this purpose two missions are conducted by municipal experts. Provisional completion of the programmes of action and their presentation at a further international workshop marks the end of the pre-implementation phase of intensive cooperation and support of the municipalities by the Service Agency and LAG 21 NRW.

The final steps in the system involve launching actual implementation of the joint programmes of action. One obvious way of making this launch as smooth as possible in both municipalities, and ensuring the support of key stakeholder groups, is a policy resolution concerning the programme of action. To successively implement the planned measures, it is usually also necessary to obtain external funding to supplement the partnership's own resources. This means that issues of project funding play an important role. Further important components are regular monitoring and updating of the programme of action in a Continuous Improvement Process. This involves defining indicators in advance that enable the partners to measure the degree to which they have achieved their objectives.

Here we should point out that the workflow described is a generalised model designed to serve

as a suggestion for the municipalities taking part. Depending on the prior experience, existing relationships or other particular features of the partnership, the process may differ slightly in terms of the content and scope of each step. In long-standing partnerships, for example, the process of establishing the working structures and channels of communication can be cut short. In new partnerships where the people concerned have not yet had any dealings with each other, this process may well take longer. Another example would be climate partnerships that may implement their first concrete projects before completing their joint programmes of action, in order to meet urgent needs. We should also point out that these steps will in some cases occur concurrently. In other words, analytical work may already take place and the working structures aligned accordingly with the key areas of action selected by the climate partnership.

The steps involved in the workflow outlined above are described in detail below.

1.1.1. Establishing the climate partnerships

Establishing a climate partnership involves setting up the working structures and channels of communication. This means informing the stakeholder groups relevant to the project, establishing the needed working structures and setting up platforms for regular communication and dialogue.

Information

As well as the partners getting in touch with and getting to know each other, ‘inform and communicate’ means communicating all the information on the climate partnership schedule, such as its background and its benefits to the various stakeholders within the local community (policymakers, administrators, civil society, general public) through different channels (e.g. the press, Internet, presentations, information events). This is designed to ensure sustainable support for the establishment of a climate partnership within the partner municipalities, and develop a joint understanding of the problems and the new strategic approach. A further aim is to win the support of a broad range of actors who will be actively involved in the partnership.

Working structures and communication

Defining the responsibilities and competences for the tasks within a climate partnership establishes the working structures. These working structures are designed to establish a transparent, viable and workable organisational framework comprising key administrators, policymakers and civil society actors who will each contribute their experience and expertise to the process. The working structures of the municipal climate partnership define clear responsibilities, and are intended to support cross-departmental cooperation within the municipal administration. They are also designed to integrate political and civil society stakeholder groups from an early stage. To facilitate communication, the key contact persons must be appointed and clearly identified within both municipalities. At the same time, it is important to involve other stakeholders both within and outside of the municipal administration and to clearly define their roles. This participatory approach is designed to ensure that the programme of action for the climate partnership can be developed on a binding and professionally sound basis, and implemented sustainably.

To guarantee this, the working structures should include the following bodies (see figure 2):

The **coordinator** plays the pivotal role within the working structures. He or she is tasked to organise the work processes of the climate partnership. The coordinator will be the key point of contact for all actors and interested parties, and will at the same time be responsible for ensuring results and for public relations work. Equally, the coordinators of the respective municipalities will provide the link in the bilateral process, and will guarantee the exchange of information and transfer of knowledge between the partner municipalities. Experience shows that it is the coordinators on both sides of the climate partnership who play a pivotal role in the flow of information and keep all the other people involved up to date on the latest developments and upcoming steps.

The **core team** of the administration supports the coordinator in organising and facilitating the launch and implementation process. Furthermore, the core team prepares the work of the steering committee. The core team normally comprises between two and five people. It should be constituted interdepartmentally (departments for

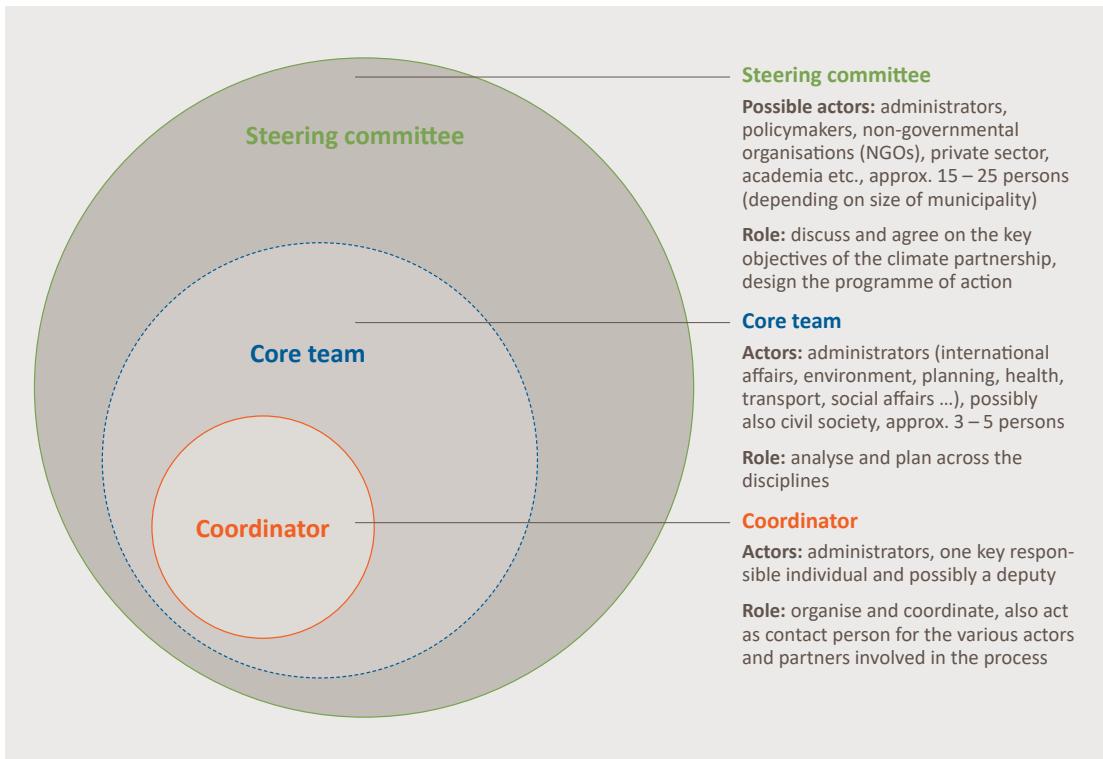


Figure 2: The working structures of a climate partnership © LAG 21 NRW/SKEW

planning, environment, international affairs, Local Agenda 21, private sector, social affairs, traffic and transport etc.), thus creating scope for integrating different approaches and solutions.

The **steering committee** is the body that designs the objectives and measures of the programme of action. When establishing the climate partnership, to prevent duplicate structures one option is to use existing participatory bodies already established within the municipality to perform its work. In the course of the process, the steering committee should meet by invitation of the coordinator on at least four occasions that are synchronised with the main activities of the project (kick-off workshop, missions).

1.1.2. Designing the programmes of action

The aim of the Municipal Climate Partnerships project is for the partner municipalities to produce a well-designed programme of action for climate change mitigation and adaptation.

The programme of action is developed in a participatory process involving the steering committees

and core teams, and continuously harmonised within the municipalities and between the partners via the coordinators. It is based on the results of in-depth analyses and the key areas of action jointly agreed for the climate partnership.

Each programme of action has a hierarchical structure with more abstract, strategic objectives at the top, moving down to more specific, action-oriented measures that concretise the joint vision. The strategic objectives form the basis for defining the operational objectives and measures, and reflect the areas of work and projects identified. The individual targets and measures should be selected such that they match the specific situations in the partner municipalities, and so that implementation can be measured. The targets and measures should also be selected so that they are accepted by the actor groups involved, are subject to realistic planning and include deadlines for operationalisation (SMART criteria).

The key areas and objectives of the bilateral programmes of action for climate change mitigation and adaptation are as heterogeneous as the partnerships themselves. In the field of climate change mitigation, objectives can be formulated for energy

efficiency, renewable energy and energy saving. It is also possible to address issues of low-carbon agriculture/forestry, reduction of deforestation, establishment of mobility management, or sustainable solid waste management to avoid greenhouse gas emissions.

Regarding the impacts of climate change – such as rising sea levels, desertification, climate-related soil erosion or more frequent extreme weather events – objectives involving the improved management of these changes are conceivable. These might include measures for coastal protection, afforestation, water management or the preservation of biological diversity.

The programmes of action also create scope for mainstreaming targets linked to overarching topics such as comprehensive education work, or expanding databases on climate change through corresponding studies.

To make the programme of action a manageable, implementation-oriented instrument, it will include both measures that can be implemented by the two partner municipalities self-reliantly, and measures for which support will be required from

third parties such as twinning associations, private investors or donor organisations. This means it will be possible to design projects of various sizes. Since the programme of action is a joint one, its objectives and measures will relate to both partner municipalities. It may include the design and implementation of so-called ‘parallel’ measures that can be implemented in both municipalities independently of the local setting (such as exhibitions on climate change or tree-planting actions), as well as measures adapted to the specific local context. Qualitative and quantitative indicators are assigned to the measures so that the results achieved can be measured.

As a preamble and to provide long-term orientation, the programme of action is prefaced with a joint vision. The joint vision of the climate partnership describes an idealised state in the two participating municipalities at a certain point in the future. This ideal state relates to the relationship between the partners, and the objectives to be achieved in the context of global climate change. The climate partnership’s vision should convey emotional images of a common and desirable future, and in this way helps stakeholder groups and the public identify with and focus on it. It

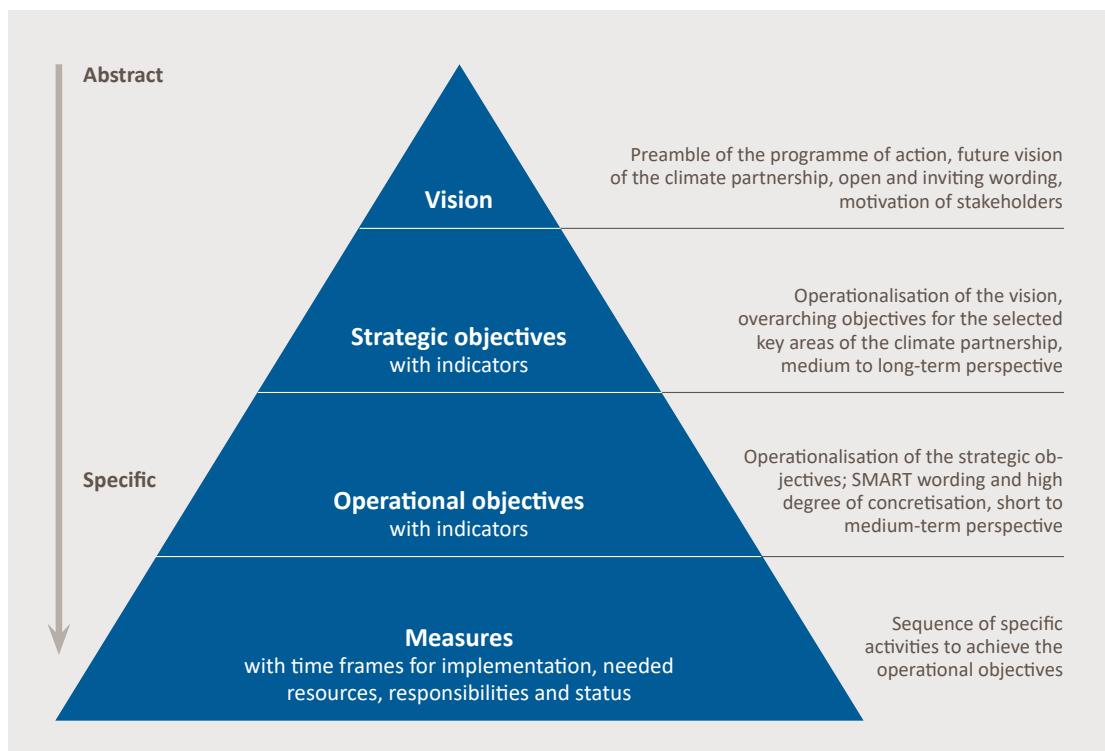


Figure 3: Key elements of the programme of action for a climate partnership © LAG 21 NRW/SKEW

should motivate people to make an active contribution. The vision will be just about feasible, i.e. somewhere between utopia and reality. The wording of the joint vision can and should incorporate visions, guiding principles or the like that already exist within the participating municipalities. It is also conceivable that the actors involved might take an existing partnership agreement and add elements of the climate partnership to it, and incorporate a joint vision there.

1.1.3. Implementation and continuous development

The joint programme of action for climate change mitigation and adaptation forms the basis for long-term cooperation within the climate partnership. The key areas of action by the climate partnership laid down in the programme are based on a sound knowledge of the situation in the respective partner municipality. The targets jointly formulated in them are based on harmonised and realistic measures for the achievement of objectives.

The final and iterative (i.e. continuous) step of work performed by the climate partnership is the responsibility of the two municipalities themselves, and begins after the international workshop for the presentation of the programmes of action. Options for implementing the measures are jointly explored and the programme of action itself is subjected to a Continuous Improvement Process.

During the preparation of the programmes of action a rough time frame should have been established by defining the duration and date of commencement of the individual measures. This should also reflect the climate partnership's priorities. In principle we recommend first of all implementing a pilot measure with a manageable time frame and modest financial requirements.

Depending on the nature and scope of the measures in the programme of action, these can be implemented using the human and financial resources of various stakeholder groups that are directly available within the two municipalities, or by attracting external funding. The strategic programme of action itself (which is the outcome of a structured process of reflection and planning),

plus the working and communication structures established, provide a very sound basis on which to apply for funding.

Given their medium- to long-term time frame, the programmes of action cannot be static. They must be actively further developed and adjusted. This is why the successful (or unsuccessful) achievement of the agreed objectives, and implementation of the measures, should be regularly reviewed through systematic monitoring. This involves applying the indicators. The results are discussed in the respective steering committees, where any necessary changes to the joint plans are identified and discussed and agreed on between the partners. Implementation of the programme of action is then continued on the basis of this adjusted plan. This overall approach involves a cycle repeated periodically that encompasses the following steps:

- design the joint programme of action (plan)
- implement the measures and projects documented in the programme of action (do)
- monitor (check)
- further develop and adjust the programme of action (act)



Figure 4: The Continuous Improvement Process, integrated into the PDCA cycle © LAG 21 NRW/SKEW

A climate partnership report that describes the implementation and further development of the programme of action at continuous intervals provides an important basis for this. The report also serves as a tool for providing information to the policymaking bodies and interested actors in the

respective municipalities. With regard to the activities themselves and optimisation of the working process, it would make sense to link the report to the municipalities' general reporting on the topics of climate change mitigation and adaptation.

2. NETWORKING THE PARTICIPATING MUNICIPALITIES

One beneficial feature of the Municipal Climate Partnerships project' is that individual municipalities or partnerships do not set out to design a joint programme of action of their own. Instead, they do so together with other partnerships. Networking the municipalities is a key tool for peer-to-peer learning that enables participants to share lessons learned and good practice examples within the network, and replicate them.

The project organises a network for each cohort of municipalities within a project phase. It also networks the climate partnerships across the phases, and internationally by enabling them to take part in conferences at which municipalities have an opportunity to present their climate partnership. The participation of the Southeast Asia Secretariat of Local Governments for Sustainability (ICLEI) in the project added yet another component to this networking.

This meant for instance that Dumangas, the Philippine partner municipality of the town of Herdecke in Germany, was able to attend the Municipal Partnerships with Asia conference held by the Service Agency in Bonn in 2017. Furthermore, in February 2018 a delegation from Dumangas travelled to Kuala Lumpur in Malaysia for the World Urban Forum. At the forum, which was organised by ICLEI together with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Food and Agriculture Organization of the United Nations (FAO), the delegates presented their activities for adaptation to climate change. Finally, in June 2018 ICLEI invited Dumangas and Muñoz, Marburg's partner municipality in the Philippines, to its triennial World Congress in Montreal (Canada).

At the same time, ICLEI also used the expertise of the climate partnerships for activities of its own in the Philippines. The delegation from Herdecke, for instance, took part in a training course for teachers on how to teach pupils about climate change – a topic envisaged as part of the cooperation between schools from Herdecke and Dumangas.

Furthermore, during their mission to Dumangas the delegation from Herdecke also supported an ICLEI-organised assessment of vulnerability to the impacts of climate change and an inventory of greenhouse gas emissions.

There are also numerous opportunities for networking within the project itself, as described below.

2.1. Levels of networking in the project

The Municipal Climate Partnerships project enables and empowers the municipalities involved in a given phase of the project to network and share experiences with each other. Here we can distinguish between three different levels of exchange:

Cooperation is based on direct bilateral contact between the two municipalities involved in the climate partnership. Sharing takes place in the form of the reciprocal exchange of local government experts, as well as communication by email, teleconference, social media etc. The municipalities themselves decide on the location and the actors to be involved in the respective mission. During the fifth phase of the project three such expert missions took place per climate partnership. The Service Agency and LAG 21 NRW provided organisational support in conjunction with other professional inputs. In Germany the missions were supported through the provision of workshop moderators. These services were provided both as the key areas for future cooperation were being defined, and during the phase of designing the programmes of action themselves.

The second level of exchange involves the networking of the German municipalities, and the networking of the Southeast Asian municipalities. To support this process network meetings are held, to which the coordinators and two members of the core team/steering committee from each of the municipalities are invited. The main purpose of these network meetings is to share lessons learned from work in the individual climate partnerships.

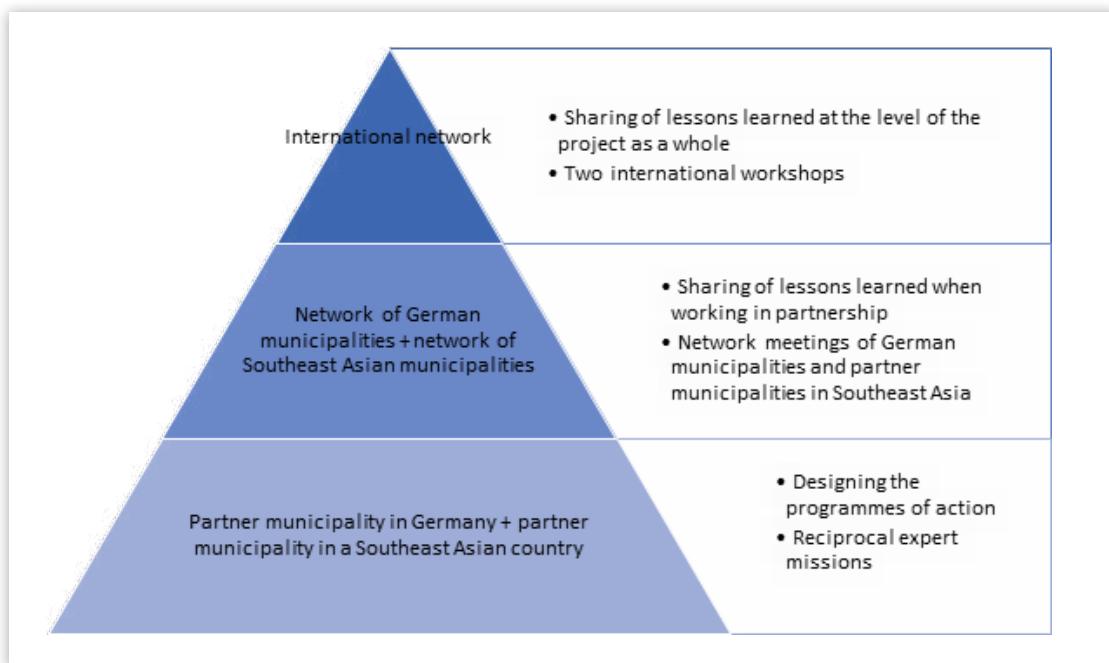


Figure 5: Different levels of networking within the project © LAG 21 NRW/SKEW

The actors involved report on the status quo in their respective climate partnership, receive feedback from the other members of the network as well as from the project team of the Service Agency and LAG 21 NRW, and plan the next steps. They also benefit from technical inputs, as well as further information on the progress of the project as a whole, and on complementary support offerings for municipal partnerships. During the fifth phase a total of four network meetings of the participating German municipalities and one network meeting of the participating Southeast Asian municipalities took place.

Two international workshops are held that are attended by representatives of all the municipalities involved – one at the beginning of the joint work on the programmes of action, and one at the end to present the results of that work. This international network of all municipalities forms the third level of networking. It focuses on sharing lessons learned at the level of the project as a whole. The purpose of the kick-off workshop is to develop a joint understanding of the methods and structure of the project, and to initiate expert exchange among the partners. The second international workshop provides a platform for presentation of the programmes of action, discussion of future cooperation within the climate partnerships, and more in-depth expert exchange.

2.2. Workshops and network meetings

Key milestones in the Municipal Climate Partnerships project are those moments when the actors in the participating municipalities meet face-to-face, work together to develop their programmes of action and profit from the lessons learned in the network of participating municipalities. We will now recapitulate the various national and regional network meetings, and the major international workshop involving all municipalities, for the fifth phase.

2.2.1. First network meeting of the German municipalities

The first network meeting of the German municipalities took place from 9 to 10 December 2015 in Bonn. The primary purpose of this meeting was to communicate basic information on the organisation and structure of the project, and to explain what services the Service Agency would provide in that context as well as what was expected of the participating municipalities. A further aim of the network meeting was to prepare the organisation and content of the forthcoming kick-off workshop in Muñoz.

To better contextualise the project, Dr. Gerd Rücker of the German Aerospace Centre held a

presentation on the local challenges that climate change entails for Southeast Asia. The coordinator of the climate partnerships Bonn (Germany) – Cape Coast (Ghana) (first phase of the project) and Bonn – Linares (Chile) (second phase of the project) also reported on the lessons learned to date in the project, when cooperating in the specific field of climate change mitigation and adaptation in the development context.

The participating municipalities had an opportunity to introduce themselves, present their experiences and projects to date, and discuss climate change mitigation and adaptation. Breakout groups were formed to reflect on the content of the network meeting, and plan the next steps for establishing the climate partnerships in light of the participants' own expectations and capabilities.

2.2.2. Meeting to prepare for the kick-off workshop

To prepare for the international kick-off workshop in Muñoz in the Philippines the German actors in the municipal climate partnerships had an opportunity to take part in a joint preparatory meeting. This took place from 18 to 19 April 2016 at the Academy for International Cooperation (AIZ) of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in Bad Honnef.

As well as discussing conceptual and organisational details of the kick-off workshop participants talked about the theoretical next steps, with reference to the manual for the Municipal Climate Partnerships project. Based on the lessons learned in the previous phases of the project, participants were provided with helpful hints and tips on how to approach awareness-raising and PR work, how to involve civil society, and partnership between equals.

On day two of the preparatory meeting participants focused on the topics of intercultural skills and cooperation. An instructor from the AIZ introduced them to the specific cultural standards and value systems that differ from European customs in many areas. Specific elements of this transfer of intercultural expertise included the sometimes steep hierarchy systems in partner countries, different styles of communication, and particular features of planning deadlines, which is important

when working together in a project. The actors from Germany also reflected together on how to deal with stereotypes, and what styles of communication and specific cultural characteristics they should expect.

2.2.3. International kick-off workshop

The international kick-off workshop, which took place from 12 to 14 July 2016 in Muñoz (Philippines), marked the beginning of municipal cooperation in the fifth phase of the project. From each of the total of ten participating municipalities from Germany, the Philippines and Viet Nam, three actors from the realms of policymaking, administration and/or civil society attended the workshop. The workshop was held with the support of the Southeast Asia Secretariat of Local Governments for Sustainability (ICLEI). As well as providing comprehensive information, the workshop in Muñoz gave participants time to get to know each other and compare notes. For many of the participants this was the first face-to-face meeting with their partners, as three of the partnerships had only been established as part of the climate partnerships project.

One key concern of the kick-off workshop was to introduce participants to the project in context, and familiarise them with its objectives, methods and structure. During an excursion organised by the City of Muñoz, participants gained a practitioner's perspective on adapted technologies and approaches to dealing with the impacts of climate change. These are already clearly noticeable in the Philippines. For instance, the mean annual temperature has increased demonstrably, as have the severity and frequency of extreme weather events such as torrential rainfall and typhoons.

To support dialogue within the partner municipalities, relevant stakeholder groups were identified on both sides and their potential role within the working structures was assigned to them. To identify common thematic areas for the climate partnerships, the partners explained to each other how climate change threatens their municipality, and what strategies and projects they have already implemented to address this. They planned the next steps for preparing their programmes of action, especially the first expert

missions, and agreed arrangements for communication.



Participants sharing ideas during the kick-off workshop for the fifth phase in Muñoz (Phillippines) © Judd Tolosa

2.2.4. Second network meeting of the German municipalities

The second network meeting of the German municipalities took place from 28 to 29 November 2016 in Herdecke (Germany). The municipal and civil society actors taking part focussed mainly on the expert missions conducted in the preceding months. In an open forum they discussed what had gone well in the missions, and what had given them food for thought. Breakout groups were formed in which participants discussed various aspects of the baseline surveys in the two participating municipalities. This included for instance what approach the respective partners had selected for setting up their working structures and for involving other actors in the climate partnership.

The Service Agency and LAG 21 NRW also provided information on opportunities for funding activities in the programme of action, and on current trends in the international climate regime. The Municipality of Herdecke, which hosted the meeting, also used it to present its own climate action initiatives to the visitors.

2.2.5. Third network meeting of the German municipalities

The third network meeting, which took place from 26 to 27 April 2017 in Wernigerode (Germany), was all about the progress made with the joint programmes of action. One core topic was the lessons learned and results obtained during the second expert mission. In small groups the participants presented and discussed the current status of their respective programmes of action in considerably greater detail than on previous occasions. Most of the climate partnerships had by that point defined key areas of action for their joint work, and further concretised this through ideas for projects. From the perspective of the project as a whole, participants were then provided with information on the next steps – the further elaboration of their joint programmes of action. The discussion focused in particular on the possible implementation of projects in the German municipality. During a comprehensive brainstorming session participants then shared ideas and experiences to date, which were entered in a mind map.

Given the strong thematic focus on renewable energy and energy efficiency among the climate partnerships of the fifth phase, Wolfgang Müller from Nuremberg presented specific project experiences from the climate partnership Nuremberg (Germany) – San Carlos (Nicaragua) (second phase of the project). These included the installation, maintenance and operation of photovoltaic systems on school buildings in San Carlos. Participants in the fifth phase were thus able to find out first-hand about factors for success and difficulties encountered when implementing projects from a joint programme of action. This enabled them to embark on expert dialogue on specific issues.

The host municipality Wernigerode invited participants on a tour of its ‘municipal environmental trail’, in conjunction with which it presented various projects for climate change mitigation and adaptation.

2.2.6. Network meeting of the Southeast Asian municipalities

The Philippine and Vietnamese municipalities met from 29 to 31 August 2017 in Hoi An (Viet Nam). The workshop was conducted with organisational support from the City of Hoi An.

As with the network meetings of the German municipalities, this conference focused on discussing progress and problems encountered when developing the joint programmes of action. In a World Café session participants discussed involving other stakeholders, work in a municipal partnership, analyses, and key areas of activity in their programmes of action. Group work within the municipal delegations also provided space for the firm planning of next steps toward the joint programmes of action.



Excursion on the topic of flood control © SKEW

Looking ahead to the finalisation of the programmes of action and the subsequent implementation of concrete projects, the Service Agency presented various kinds of support offered in the form of financial and human resources. The Service Agency explained what conditions the German municipalities needed to meet, and what contributions would need to be provided by their partners in the Philippines or Viet Nam.

The City of Hoi An invited the participants to join a full-day excursion, which gave them an impressive demonstration of the specific challenges of climate change and possible solutions. The range of topics covered included coastal erosion, solid waste

management, sustainable tourism, and measures through which the municipality is responding to flooding in the old city, which is a designated UNESCO world cultural heritage site.

2.2.7. Fourth network meeting of the German municipalities

The fourth and final network meeting of the German municipalities prior to the international workshop to present the programmes of action took place from 20 to 21 November 2017 in Siegburg. By this point almost all climate partnerships had produced first drafts of their joint programmes of action, which they discussed intensively with each other in the course of the network meeting. Due to the similarity of their experiences and the challenges they had encountered, all participants were able to gain important findings and suggestions for finalising their programmes of action. This dialogue was supplemented with lessons learned by the project team from previous phases of the project, and thus with key recommendations for continued development of the programmes of action in the long term.

To coincide with completion of the programmes of action and the beginning of the phase of implementing concrete projects, participants then received an introduction to the results-based planning of development projects. This included an explanation of how to use results frameworks for project planning and implementation. Results frameworks go beyond the output of a project that is immediately visible, by targeting medium- to long-term results. This allows project planners to visualise complex inter-relationships between input, output (direct results/product) and outcome (impact).

Since the fourth network meeting was the final one prior to the international workshop for presentation of the programmes of action, participants discussed the upcoming reports and preparations for the international workshop. The international workshop marks the end of cooperation between the Service Agency/LAG 21 NRW and the municipalities involved in the project at the level of intensity with which participants have so far been familiar. All sides did, however, express an interest in continuing the process of exchange. The participants recommended holding a network meeting at

least annually in order to stay up to date on further developments in the other climate partnerships.

2.2.8. International workshop for presentation of the programmes of action

The international workshop to present the programmes of action took place from 2 to 4 May 2018 in the Lichtenberg district of Berlin. It was attended by delegates from all ten of the municipalities taking part in this phase of the project, including eight mayors and mayoresses. As well as local administrators, participants also included councillors, civil society stakeholders and academics. A total of 60 people attended day one of the conference.



Presenting the poster for the partnership Herdecke – Dumangas
© Martin Magunia

Day one was all about presenting the joint programmes of action. An expert introduction to the topic was provided by Dr. Marcus Groth of the Climate Service Centre Germany (GERICS), who held a keynote speech on climate change mitigation and adaptation. A general review of the fifth phase of the project provided by the Service Agency and LAG 21 NRW, plus a poster exhibition, traced the path taken by the climate partnerships as they prepared their joint programmes of action. The municipal delegates explained how their programmes and the key areas of action had emerged, and presented concrete measures from their programmes in plenary. The climate partnerships decided to pursue among others the topics of

environmental education, sustainable agriculture, mobility and renewable energy.

Prompted also by two excursions to selected measures for environmental education and renewable energy, this led to a lively expert dialogue across the climate partnerships on involving children and teenagers, renewable energy, and institutionalising the climate partnerships in the municipalities. Following a critical review of the project to date, the municipal partnerships also used the meeting to reach agreements on future communication, and to define the next steps for further developing their climate partnerships. In most cases the partnerships focused on submitting project proposals for funding, and implementing their first joint projects. At this point the organisations managing the project provided the participants with information on the support available for realising the programmes of action, and on their future role in continuing to facilitate the partnerships. Finally, participants were able to say how they saw the project by completing an evaluation questionnaire.

3. REPORTS OF THE MUNICIPAL CLIMATE PARTNERSHIPS

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3.1. Berlin-Lichtenberg - Hoan Kiem, Hanoi

	Berlin-Lichtenberg (Germany)	Hoan Kiem (Hanoi, Vietnam)
Population	275.142	160.614
Area	52,12 km ²	5,28 km ²
Possible or already noticeable impacts of climate change	<ul style="list-style-type: none">• Significantly more hot days ($\geq 30^{\circ}\text{C}$) and hot nights ($\geq 20^{\circ}\text{C}$)• Increase in heavy rainfall events that affects the building stock, transport infrastructure and sewerage• Compared to recent years the rainfall of one month occurs over two days, with dry periods in between• Increase in heavy storms (affecting trees)	<ul style="list-style-type: none">• Air: polluted due to private transport; diesel emissions containing nitrogen oxides can cause respiratory disease• Water: in the district there is sufficient water but sometimes in the fields beside the Red River there is drought• Solid waste: trash problem• Increase in the number of hot days above 42°C in summer 2017 (never seen before)• Increase in heavy storms

Profile of the climate partnership

Hanoi is the centre of administrative, political, economic and cultural life in Viet Nam, with many offices of the government and important ministries located there. Hoan Kiem is the economic, commercial and services centre of the capital. Environmental protection is identified as one of the top-priority tasks.

There are 18 wards in Hoan Kiem covering a total of 5,287 sq. km, divided into 4 areas: Hanoi Old Quarter, Old Streets, Hoan Kiem Lake and the surrounding areas. Hoan Kiem district currently has Hoan Kiem Lake, which is a natural lake located outside the residential zone covering 114,392.6 sq. m, with a perimeter of 1,540 m and an average depth of 1.5 m.

The total population of the district is over 160,614, which means that basic infrastructure is insufficient to meet the population density. This results in environmental pollution caused e.g. by

unregulated waste disposal. In Hanoi, rainwater, domestic water and wastewater flow into the same system. Many small eating outlets encroach on pavements. Other problems include unplanned flea markets, and organisations and facilities discharging untreated waste. In the Red River Delta area in Chuong Duong and Phuc Tan wards, mainly unprocessed wastewater is discharged directly into rivers and drains, causing environmental pollution. Public awareness of water pollution and environmental protection is not high; noise pollution is also an issue. Furthermore, in Hanoi there is only one enterprise for wastewater treatment.

Hoan Kiem has produced a brochure on environmental law and organised many events to raise awareness of the law in the 18 wards of Hoan Kiem. Two schools have plans in place for environmental education in the classroom. In addition, a group of staff from the Environment and Natural Resources Department of Hoan Kiem offer

consultations for citizens, for instance on energy and how to reduce pollution.

Berlin-Lichtenberg is a green, child- and family-friendly district. It is one of twelve districts of the German capital Berlin. It has a very long expanse from north to south with a juxtaposition of villages and urban centres, and buildings ranging from prefabricated structures to villa developments. Lichtenberg is also characterised by workers' colonies and industrial areas.



The delegations during the kick-off workshop © Judd Tolosa

In 2010 Lichtenberg drew up a **climate protection masterplan** plus a sustainable mobility masterplan that included pilot projects. The Environmental Office is the central point for environmental education in the district. It offers energy consultation on reducing energy in private households.

The **cooperation** between Berlin Lichtenberg and Hoan Kiem has existed since 2015, and focuses on the climate partnership. The impacts of climate change in Lichtenberg and Hoan Kiem motivated both municipalities to work on this issue., and share their experiences and knowledge. The two sides share the vision that you can and you have to act locally to solve global challenges.

Designing the programme of action

Officials of the People's Committee of Hoan Kiem District and Lichtenberg District signed a **Memorandum of Understanding** in 2015 in order to harness the benefits for both sides, including cooperation on environmental protection and

nature, and participation in the Municipal Climate Partnerships project.

Within this climate partnership, the two cities will design a joint action programme on climate change adaptation and mitigation, which will include specific objectives, measures and allocation of resources. Subsequently, the joint action programme will be implemented within the framework of the city partnership. Responsibility rests with the two municipalities.

Hoan Kiem District set up the **steering committee** to implement a joint action programme between Hoan Kiem and Lichtenberg districts on climate protection. It includes the Department of Natural Resources and Environment, Department of Urban Management, Department of Education and Training, the Office of the People's Council, the Management Department of Hanoi Old Quarter and Dong Xuan Joint Stock Company.

The actors of the **steering committee in Lichtenberg** include: actors from the private sector (Dong Xuan Centre), institutions (Solidarity Service international, Organisation of Vietnamese in Berlin and Brandenburg, Environmental Office), educational institutions (Technical University of



The core teams holding a meeting during a mission
© Bezirk Berlin-Lichtenberg

Berlin, Barnim secondary school) and the local authority (e.g. Commissioner for Partnerships, Department of Streets and Green Areas, Environmental and Nature Department, Commissioner for Energy, Commissioner for Climate). The **core team** consists of the Department of Streets and Green

Areas, Commissioner for Energy and the Solidarity Service International foundation, which supports the administration of this project. The coordinator is the Commissioner for Partnerships. The Vietnamese Embassy in Germany also provides support e.g. for visa application, although it is not a part of the formal structure of the project.

At the kick-off workshop in the Philippines in mid-2016 the first exchange between Lichtenberg and Hoan Kiem took place. At network meetings in Germany and Hoi An, the two municipalities took the opportunity to share experiences with other involved municipalities and obtain detailed information about the project.

Important documents and agreements were discussed and approved during the missions. Continuous communication was maintained by email. Exchange between staff to facilitate the design of the joint action programme is a key element of the Municipal Climate Partnerships project. By exchanging the information and methods between two sides, a specific programme of action was developed.

During the first project mission (to Hoan Kiem), the two sides got to know each other, and familiarised themselves with the situations in the respective districts. The structures of the project were discussed and communication channels agreed. During the second mission (to Lichtenberg), the Vietnamese partners got to know the structures and partners in Lichtenberg, and the two sides also discussed the main issues for the joint action programme. During the third mission (to Hoan Kiem) these issues were concretised, and the two sides also worked out the first specific project ideas. The delegations comprised the responsible persons of the core teams.

3. Key measures of the programme of action

The two cities collaborated to develop a joint programme of action as required by the Municipal Climate Partnerships project. Experts from the two sides will continue to discuss specific topics of action, and define objectives, solutions, resources and financial resources for environmental protection, and climate change mitigation and adaptation.

The four strategic objectives of the programme of action are

- **Raising awareness of climate change**
- **Raising awareness of environment and nature**
- Developing **renewable energy**
- Developing **sustainable mobility**



The delegation from Hoan Kiem visiting Herzberge Landscape Park in Berlin-Lichtenberg © Bezirk Berlin-Lichtenberg

The priority issue of both municipalities is awareness-raising work and the protection of environment. In these areas the two sides plan mostly short-term activities. The operational objectives in the field of **raising awareness of climate change** are

- capacity building (e.g. training of 200 multipliers for energy saving in public buildings)
- research and data collection (e.g. install thermometers in public offices to raise awareness of the need to heat or cool down)
- education (e.g. on the natural greening of school grounds).

The operational objectives for improving the **environment and nature** in the districts will focus on:

- water/wastewater (e.g. sharing lessons learned on wastewater between hospitals)
- environmental protection (organic farming on Red River Island)
- tree protection (e.g. tree planting)
- waste reduction (e.g. raising awareness of waste reduction at schools).

The operational objectives concerning renewable energy and sustainable mobility focus more on medium- and long-term realisation. The introduction and use of **renewable energy** will be realised in the fields of:

- research
- photovoltaic systems (e.g. a photovoltaic system on the roof of the Dong Xuan Center).

The objective of **sustainable mobility** focuses on:

- the mobility masterplan (develop a mobility concept)
- e-mobility (introduce a hire system for e-bikes).

The main measures in the coordinated action plan include among others: training communicators, organising training conferences, public awareness-raising at neighbourhood meetings, awareness-raising at schools, measurement kits in Hoan Kiem District, strengthening cooperation between Viet Du High School of Hoan Kiem District and Lichtenberg's Barnim School in the field of climate change and environmental protection; waste treatment in Hoan Kiem District; wastewater treatment in hospitals; nature reserve, Red River Island Project; exchange of expertise in the field of plant protection.

All four strategic objectives involve key challenges in both districts, and decisions and plans as well as pilot projects are already in place. There will be various kinds of cooperation in these fields (sharing of lessons learned, joint projects such as the school exchange, projects that are financed and supported by Lichtenberg but realised in Hoan Kiem, etc.). All measures will be implemented jointly, though.

The objectives are inter-related. For instance, it is only possible to achieve sustainable water management given the right public awareness.

Many activities in the field of awareness-raising and the environment have already been launched or are planned for the near future, whereas the goals of renewable energy and sustainable mobility are more medium- or long-term. Nearly all objectives have to be seen in the context of the policies of the respective capitals, and depend directly on them. The approval of the district Borough Assembly/ Peoples' Committee is essential for realising the objectives and activities.



Planting the 'tree of friendship' together
© Bezirk Berlin-Lichtenberg

3.2. Ebhausen – Lubang

	Ebhausen (Germany)	Lubang (Philippines)
Population	4.807	23.069
Area	24,56 km ²	129.51 km ²
Possible or already noticeable impacts of climate change	<ul style="list-style-type: none"> Agriculture and forestry need to adapt to longer dry periods Increase in heavy rains, storms and hail events Increase in heat waves that also impact the population's health 	<ul style="list-style-type: none"> Longer dry periods and rising temperatures are adversely affecting agricultural output and the health of the population An increase in heavy rainfall and extreme weather events are causing more frequent and stronger typhoons that are affecting agricultural output and the population

Profile of the climate partnership

According to the Modified Coronas Climatic Classification System, a type I climate prevails in Lubang, with two distinct seasons: a dry period from November to April, and a rainy period from May to October. Lubang is located south of the island of Luzon in the Philippines. Every year it is hit by some 25 typhoons, and must cope with the resulting damage. Moreover, the island is afflicted by tropical events such as tropical depressions during the rainy seasons. To tackle and mitigate the impacts of climate change such as more frequent storms, extreme heat, drought, flooding and saltwater intrusion, Lubang has revised its Municipal Comprehensive Land and Water Use Plan (CLWUP). This includes disaster risk management, as well as strategies for adapting to climate change and climate change mitigation measures.

Like Lubang, Ebhausen is also having to contend with storm events on a more frequent basis, the most serious being cyclone 'Lothar' in 1999. Flooding has also become a more frequent occurrence – including historically high flood levels and hail events – which is why Ebhausen has extended the activities it started in 2010 as part of the European Energy Award® concerning global sustainability, climate change and climate change adaptation

The municipalities of Ebhausen and Lubang only came together in 2016 when they joined the fifth phase of the Municipal Climate Partnerships project. Neither municipality had been in

a partnership before. However, both Ebhausen and Lubang had already been actively engaged in the field of sustainability, resource conservation and the transition to renewable energy for many years. Consequently, their new climate partnership has a sound basis to build on. The first reciprocal missions swiftly revealed that, although the Pacific island and Black Forest municipalities start from different premises, they are working on the same problems: People need to become more aware of climate change and alter their behaviour accordingly. Furthermore, the municipalities have to take steps to better prepare their inhabitants for coping with climate change-driven weather events, such as typhoons, floods and periods of drought.

Designing the programme of action

Following the municipal council's official resolution to participate in the fifth phase of the Municipal Climate Partnerships project, in July 2016 three delegates from Ebhausen attended the kick-off workshop in Muñoz in the Philippines: Daniela Schweikardt, the municipal employee responsible for leading and coordinating the project; Tibor Grodtke, a representative of the municipal council; and fellow municipal councillor Ursula Hammann representing the NGO 'Ebhausen Fairwandeln'. In **Ebhausen**, the core team that has supported the climate partnership comprises members of the non-governmental organisation, as well as members of the energy team and municipal employees. Where required, individual specialists were also brought in (e.g. teachers, or staff from the forestry or agricultural departments).



The two municipalities meeting for the first time in Lubang
© Lubang

The **core team** from **Lubang** comprised the two coordinators of the climate partnership, Mayor Roberto M. Sanchez and Ray D. Morales, who is responsible for planning and development in the municipality. Also involved were Teresa A. Pagilagan, Lubang Health Office, Alfredo P. Insigne Jr., an engineer in Lubang, Elsie P. Toverada, who is responsible for agriculture in the municipality, and Charles Z. Villas, Deputy Mayor and councillor.

As the municipalities did not know each other beforehand, they used the first two missions mainly to familiarise themselves with the situation on the ground in the respective partner municipality, and to share expertise. From 23 to 29 October 2016, Mayor Roberto Sanchez, priest Giovanni Gatdula and project coordinator in Lubang, Ray Morales, visited Ebhausen. In a relatively short period of time, it became clear that Lubang would be focusing on renewable energy and water supply. Consequently, Daniela Schweikardt was accompanied by two experts on her trip to Lubang from 29 January to 5 February 2017: Alfred Salzer (engineer from the volunteer energy team) and Peter Holzäpfel (vocational school teacher for heating, sanitation and air-conditioning technology and a member of the local church council). At the same time, talks were held with the University of Nürtingen-Geislingen's Institute for Applied Agricultural Sciences, in order to leverage corresponding expertise for adaptation to climate change in agriculture. These two missions led the two sides to identify 'renewable energy', 'agriculture' and 'awareness-raising' as the main topics for the programme of action. Ebhausen has involved

a local comprehensive school, Lindenrainschule, in the awareness-raising component. Furthermore, Ebhausen held a public information evening on the climate partnership. During Lubang's most recent visit to Ebhausen, which took place from 7-14 January 2018, the two sides worked on these key topics, breaking them down into individual measures. Despite the differences between the municipalities, they agreed early on that they could benefit from each other and undertake different activities to achieve the shared goal.



Visiting the water supply utilities in Ebhausen with the delegation from Lubang © Ebhausen

Key measures of the programme of action

This project has enabled the two municipalities to draw up a joint, long-term programme of action for climate change mitigation and adaptation. First of all, the two sides agreed on three key areas of activity and corresponding individual measures:

- Promoting **sustainable agriculture**
- Developing **renewable energy**
- Raising **awareness of climate change**

In due course, the programme of action can then be adjusted and taken forward as required, depending on the human, technical and financial resources available.

In the long term, in the first key area – **sustainable agriculture** – the partnership aims to introduce changes to technologies, planting methods and seeds in order to secure the organic and sustainable production of foodstuffs to feed the population.

The second key area concerns the expansion of **renewable energy**. On the one hand, more own-use photovoltaic systems are to be installed on both partners' municipal buildings. At the same time, however, since local people are also designated beneficiaries, they too will be provided with information and encouraged to install their own personal PV systems.

Ebhause and Lubang have made **awareness-raising** a third, stand-alone topic, even though this issue actually intersects with all areas. Information will be provided at various levels, so that ultimately everyone can develop their own personal sustainable lifestyle. In the long term, this is the only way that the climate goals can be met.

At the moment, we are still in the process of developing measures for each of the key areas, and working out the finer details. We have made the most headway with agriculture, and are now engaged in concrete talks with the Institute for Applied Agriculture Sciences of **Nürtingen-Geislingen University (HfWU)** about assigning a student. He or she will be tasked to survey the existing soil, fertiliser and seed resources in Lubang as part of his/her master's dissertation, and use the results to develop a strategy for launching improvements in the context of climate change. Some of the ideas under consideration include the further development of an organic fertiliser, training for farmers or the rollout of flood- and drought-resistant seed. Ebhausen can also make use of the results through its land cadastre, and has already successfully done so for forest management (variation of tree species, depending on soil type). Thus, this certainly holds great promise for planting of agricultural land. Generally speaking, the focus is not just on achieving higher yields to secure the municipalities' supply of basic food-stuffs, but specifically on organic fertilisation too.

Ebhause already has a number of PV systems installed on municipal buildings. In Lubang this is not yet the case. For this reason, the first target we agreed for 2024 was to install three photovoltaic systems. Also, at least 80 % of the population are to benefit in some way from the renewable energy produced. One way of achieving this is to install small PV systems on health posts, schools, water tanks or other municipal buildings – initially on Cabra Island in Lubang, where it is particularly difficult to obtain drinking water. The energy

generated there will be used to power PCs and medical appliances etc. directly. If it proves feasible to supply power to some private households close by, then more local citizens would benefit directly. Many detailed issues have to be clarified before this measure can be rolled out in Lubang. For instance, it is necessary to check the load-bearing capacity of the roofs, calculate the size of the PV systems and sort out any existing or future electrical installations. It is also imperative to train local staff, involve private households, and work out the tender procedure. A further issue is applying for project funding. The partner municipalities see enormous benefits for the population and are very keen to realise these goals in the scheduled time frame.



The delegation from Ebhausen visiting an organically managed farm in Lubang © Peter Holzapfel

For the German municipality, it is much easier to install additional PV systems. The focus here should therefore be on installing more privately owned PV systems. Ebhausen municipality is already supplying green electricity to many municipal facilities. Now it has to persuade private households to switch to renewables.

3.3. Herdecke – Dumangas

	Herdecke (Germany)	Dumangas (Philippines)
Population	24.000	69.108
Area	22,4 km ²	128,70 km ²
Possible or already noticeable impacts of climate change	<ul style="list-style-type: none"> • CO₂ emissions • Heavy rains and flooding • Heavy winds and storms • Heat island effects 	<ul style="list-style-type: none"> • Increasing/high temperature • Flooding during rainy season • Salt water intrusion • Soil erosion/siltation • Pest and disease infestation • Sea level rise • Low production of crops • Loss of livelihoods and infrastructures • Storm surge in coastal areas • Denuded mangrove areas • Disease problem/epidemic to human • CO₂, NH₂ emissions

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Profile of the climate partnership

Herdecke is a town in the district of Ennepe-Ruhr-Kreis, in Germany's federal state of North Rhine-Westphalia. It is located south of Dortmund in the Ruhr region. Its location between the two Ruhr reservoirs Hengsteysee and Harkortsee has earned it the nickname Die Stadt Zwischen den Ruhrseen, which means, the city between the Ruhr lakes. It has a total land area of 2,240 hectares and a total population of about 24,000. As a member of the Climate Alliance, the Municipality of Herdecke has committed to reducing its CO₂ emissions by 10% every five years and has set a milestone of 30% reduction in per capita emissions (baseline year 2010) by 2030. Its core strategies for achieving its target focus on energy saving and efficiency, increasing the use of renewable energies, renovation of buildings and encouraging participation throughout the community.

Dumangas is a coastal municipality in the Province of Iloilo in Western Visayas in the Philippines. It is composed of 45 barangays, 20 of which are coastal with a total coastline of 21.6 km. Dumangas has a total land area of 12,870 hectares with a total population of 69,108. It is primarily an agricultural community, with a total of 11,355.50 hectares or

90.6% of the total land area being devoted to agriculture, which in turn comprises 7,001.55 hectares of agricultural farmland and 4,353.95 hectares of fishponds. Dumangas is regularly exposed to two extreme weather conditions: flooding during the rainy season and drought during the dry season. Agriculture and fishery are highly vulnerable to climate variability, extremes and changes. Thus, the climate change initiatives of Dumangas focus more on increasing the adaptive capability of farming and fishery. This is being undertaken through the flagship programme, the 'Climate Field School'. Mangrove reforestation is also one of the climate mitigation measures that are being undertaken. Long term plans also include massive and sustained environmental education, increasing renewable energy use, energy saving and energy efficiency.

Both Herdecke and Dumangas face more or less similar challenges brought about by climate change. Both municipalities have felt the impacts of increasing precipitation with sometimes torrential rainfall and an increase in health risk due to prolonged heat. In Dumangas, drought furthermore leads to massive crop failures. Although the effects vary greatly, both communities have been

hit by storm events in the past. Also, both have more or less similar strategies for coping with and mitigating climate change impacts, thus, the call for partnership is very viable.

Having recognised the importance of the partnership project, this initiative was presented to the relevant sectors in both communities and has so far generated positive responses and support. In Dumangas in particular the community has had its own share of challenges in the past due to the perennial impact of climate change in all sectors of society. Everybody recognises the fact that a global initiative to address climate change issues is of paramount importance today.



Signing of the friendship agreement between the Municipalities of Dumangas and Herdecke © Stadt Herdecke

Designing the programme of action

Initially it was the Service Agency and ICLEI, Southeast Asia (SEAS) that put Herdecke and Dumangas in touch with each other. The partnership between the two municipalities then began with a letter of proposal from Herdecke in 2015 asking Dumangas to be its partner in the Municipal Climate Partnerships project, which Dumangas accepted. Project Coordinators were assigned to act as the point of contact and to communicate the project status appropriately to all other parties involved.

Representatives of the two municipalities first met during the international kick-off workshop in Muñoz, Nueva Ecija (Philippines) on July 12-14, 2016. An initial exchange of ideas on climate change challenges and initiatives took place during the workshop. Baseline reviews were conducted

for both sides. Following the kick-off workshop, the team from the Municipality of Herdecke visited Dumangas together with two representatives from LAG 21 NRW.

Meetings were held with various actors including the municipal officials, heads of departments / offices, academics and civil society organisations to present the project objectives. The team also explained the activities and the benefits of the partnership project. To get to know Dumangas and gain a better understanding of its situation, the project team from Herdecke visited key facilities of the town. Sites visited included the agrometeorological station, the climate field school, Dumangas port, a housing project for the victims of Typhoon Haiyan, cropland that included some agricultural pumping stations, Bangus Hatchery, flood protection structures (mega-dikes), and the municipal garbage dump site.



Visiting Balud Primary School during the mission to Dumangas © Matthias Wittler

To lay down clear responsibilities and roles, create transparency, and support cooperation between the political decision-makers, administrators and civil society actors, the Mayor of Dumangas, Ronaldo B. Golez, issued an executive order establishing the creation of the project team for the municipal climate partnership.

A delegation from Dumangas visited Herdecke from 7 to 11 November 2016. Here too, the first step was to familiarise the delegation with the general situation in the municipality. As a result of the visit working structures were established in each partner municipality, and possible **key areas**

of cooperation were identified. A first draft of the programme of action was produced.

Both partners have appointed core teams that meet regularly and bear the main responsibility for implementing the various projects. Their members are drawn from various working fields.

The **core team in Herdecke** comprises:

- Karin Striepen – Chairperson, Committee on Climate and Environmental Issues
- Annette Althaus – Department Head of Building Division
- Daniel Matißik – Head of Planning Department
- Sonja Fielenbach – Municipal Sustainability Manager
- Jörg Piontek-Moeller – Municipal Climate Change Officer, and Coordinator of the Climate Partnership
- Dr Ralf-Rainer Braun – External consultant
- Matthias Wittler – School Principal

The **team in Dumangas** comprises:

- Guisseppe Karl D. Gumban – Chairperson, Committee on Agriculture, Natural Resources and Environment
- Saul D. Deasis – Municipal Planning and Development Coordinator
- Eugenio D. Decastillo, Jr. – Municipal Agriculturist
- Arande D. Detablan – Local Disaster Risk Reduction Management Officer II
- Jose Vahn D. Cordova – Municipal Engineer
- Jeraldine J. Subong – Municipal Environment and Natural Resources Officer
- Flosel Almirante – Project Coordinator

The second mission to Dumangas undertaken by the team from Herdecke paved the way for a clearer picture of which key areas would be feasible for the partnership. The themes shifted somewhat in relation to what the two sides had discussed at the workshop in Herdecke, and the partners already began thinking about several specific projects. To set the seal on the partnership the councils approved an **official friendship agreement**, which the two mayors signed in July 2017.

The third mission then led to a final resolution concerning the key areas of cooperation and the definition of a specific programme of climate action. By this point both sides were familiar with

the challenges and potentials faced by any municipality, and therefore were able to agree on what this partnership would be able to achieve.

Key measures of the programme of action

Using the baseline survey for both municipalities, the two sides identified five areas of action. Raising public awareness of the impacts of climate change is especially important, and plays a special role in all areas. The programme of action is designed to bring about long-term behavioural changes among residents of both municipalities.



Attending Environmental Day in Hagen during the mission. Delegates shown here taking part in a radio interview. © Flosel Almirante

The main areas of cooperation are:

- Promoting **renewable energy and energy efficiency**
- Promoting **sustainable mobility**
- **Adapting to climate change**
- **Environmental education**, awareness raising and developing education programmes on climate change and other environmental issues
- **Developing civil protection measures** against storm damage, torrential rainfall and other impacts of climate change

The joint programme of action encompasses **five strategic objectives** broken down into 14 targets and numerous measures.

Strategic objective 1 involves **energy efficiency** and **promoting renewable energy**. The transformation to renewable energy sources and systems requires further support in both municipalities.

Although the energy transformation in Germany got off to a good start a few years ago, further expansion of renewable energy use has come to a standstill. In Herdecke this involves in particular exploiting the potential for photovoltaic energy. In Dumangas, almost the entire energy supply currently comes from fossil fuels. There are many starting points for jointly developing and implementing renewable energy measures.

However, it is foreseeable that merely switching to other sources will not be enough. As technologies advance, a high degree of energy efficiency will also be needed in order to meet the continued rising demand for energy. This is why the joint programme also includes measures in this area.

During the missions the two sides quickly established that irrigating agricultural land in Dumangas was probably the biggest challenge. Most farmland is irrigated using old, inefficient diesel pumps. This is why the partners decided to implement a first measure in this area. With a grant from the Service Agency's Partnership Projects for Sustainable Local Development programme, which is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), old diesel pumps will be replaced with highly efficient solar pumps. As well as addressing energy issues this particular project is also designed to successfully achieve targets for the strategic objectives of adaptation to climate change, and education.



On a mission – the first meeting with the core team in Dumangas and farmers © Flosel Almirante

Strategic objective 2 – promoting sustainable mobility – includes measures for safe, efficient

and clean mobility. Expanding electromobility is a focus of both municipalities' plans for the future. Alongside measures to improve public transport, this will also include a joint themed campaign to raise awareness among interested businesses and citizens. In Herdecke the partnership is seeking cooperation with regional energy suppliers. Dumangas, on the other hand, may apply to the Asian Development Bank for funding.

Another key area involves promoting cycling. The partners intend to make biking an integral part of school curricula.

Both municipalities must adapt to the future challenges of climate change. Strategic objectives three and five were therefore drawn up with corresponding measures. While goal three tackles **adaptation to climate change**, goal five involves **civil protection measures**, and therefore relates to situations in which adaptation measures are no longer adequate. As well as providing comprehensive public information, this also involves developing and improving existing municipal capacities.

Strategic objective three includes three specific targets. First of all, by expanding the Climate Field School the partners intend to further develop the training programme for farmers in Dumangas. Secondly, measures to protect against flooding and torrential rainfall are being expanded in both municipalities. Here the focus is on restoring streams and rivers. The programme also includes the preservation and restoration of mangrove forests and other woodlands.

One long-term objective is to establish a Mangrove Eco Park in Dumangas. This project will pursue a holistic approach that combines reforestation, coastal protection and tourism with education. An appropriate site has already been identified. Currently, ownership rights are being clarified and sponsors are being sought in both municipalities who can promote the planting of mangroves on specific lots as part of a special climate action programme. In a final step it might be possible to build a visitor and learning centre there.

Strategic objective four is about providing **environmental education** for citizens in both municipalities. In addition to two awareness-raising campaigns on solid waste management, and on climate change and environmental protection

in general, the focus here is on making climate change an integral part of school curricula in both municipalities.

As part of a school partnership between two primary schools that has already been launched, teaching materials will be developed that can later be made available to other schools. Cooperation between secondary schools is also planned for a later phase.

Strategic objective five – **civil protection** – focuses on training municipal staff in Dumangas on measures for civil protection.

3.4. Marburg – Muñoz

	University City of Marburg (Germany)	Science City of Muñoz (Philippines)
Population	75.329	81.483
Area	123,92 km ²	163,05 km ²
Possible or already noticeable impacts of climate change	<ul style="list-style-type: none"> • Flooding caused by heavy rainfall and high water • Droughts • High thermal loads in the summer, particularly in the inner city 	<ul style="list-style-type: none"> • Flooding caused by heavy rainfall and high water • Droughts • Increase in typhoons • Growing unpredictability of the weather, especially the course of typhoons

Profile of the climate partnership

The University City of Marburg is located in the central region of Hesse in the district of Marburg-Biedenkopf, approximately 100 km north of Frankfurt. Marburg is home to the Philipps University. Established in 1527, this is the oldest university in the world that was founded as a Protestant institution. To this day, the university and its students dominate the cityscape.



The delegations from Marburg and Muñoz, and Engagement Global, presenting the signed Memorandum of Understanding
© Judd Tolosa a

The Science City of Muñoz is located in the province of Nueva Ecija in the interior of the island of Luzon, approximately 150 km north of Manila. Muñoz was named ‘Science City’ through the Republic Act 8977 of 9 December 2000. This made it the first and only Science City in the Philippines. It is home to 17 national institutions and agencies

within the city limits, as well as the Central Luzon State University – the city’s supreme scientific institution.

The climate partnership between the University City of Marburg and the Science City of Muñoz is a new partnership, the establishment of which was facilitated by the Service Agency and ICLEI SEAS. The two partner municipalities have similar-sized populations and cover a similar area of territory. Marburg comprises an urban core plus 18 districts, some of which have a village-like structure. The Science City of Muñoz comprises 37 barangays (villages). One important precondition was that communication between the two partner municipalities could take place in English.

Designing the programme of action

Delegates from the University City of Marburg and the Science City of Muñoz first met at the kick-off workshop for this phase of the project, which was held in Muñoz in July 2016. The following individuals from Marburg took part: Marion Kühn (expert service provider for climate change mitigation, greenspace and cemeteries), Wiebke Smeulders (Officer for Climate Change Mitigation) and Christine Heigl (Chair of the TERRA TECH association). The following individuals from Muñoz took part: The Mayor, Dr. Nestor L. Alvarez, Dr. Jefferson Ongoco (Officer-in-Charge, City Planning and Development Office), June Mico (Officer-in-Charge, City Environment and Natural Resources Office) and Joey Correa (Officer-in-Charge, Disaster Risk Management).

The two sides worked intensively in groups, and performed initial baseline reviews. One key milestone was the handover of the Memorandum of Understanding at the end of day one.

The first mission took place from 14 to 22 March 2017. A delegation from the Science City of Muñoz visited the University City of Marburg. It was important for them to meet and get to know various actors (the Mayor, Officer-in-Charge of Construction Office, working group/steering committee, municipal utilities of Marburg, civil engineering service and the fire brigade). Some of these actors, such as staff of the municipal utilities and the civil engineering service, are also part of the **steering committee**.

The members of the delegation from Muñoz were also particularly interested in meeting actors from municipal entities such as the fire brigade, because this enabled them to discover more about the equipment used for civil protection in the partner municipality. During the visit the Marburg Fire Brigade presented their colleagues from Muñoz with protective suits.

Excursions took place on various topics, as well as a workshop conducted by the project team from the Service Agency and LAG 21 NRW.



The delegation from the Science City of Muñoz in front of Marburg Castle © Stadt Marburg

One key outcome was the definition of key areas for the climate partnership: renewable energy, awareness-raising, rainwater retention and flood protection. These had already been formulated during the initial baseline analysis at the kick-off

workshop, and further elaborated at the joint workshop during the first mission. The key areas and the programme of action were developed in more concrete detail during the meetings of the respective working groups, the joint working meetings with the delegations from Marburg and Muñoz, and the excursions.

The **core team** in **Marburg** comprises Marion Kühn, Wiebke Smeulders and Achim Siehl (Redevelopment Officer). The **steering committee** in **Marburg** comprises representatives of numerous stakeholder groups and institutions which contribute their various perspectives and special expertise. These include various specialised services in the University City of Marburg, the Marburg Municipal Utilities, the Philipps University of Marburg, Marburg Fire Brigade, the TERRA TECH association, Auteos Autonomous Solar-Powered Systems, the city library, Marburg One World Shop, Marburg Children and Youth Parliament, Marburg Adult Education Centre, the Municipality of Stadtallendorf, the Protestant Church of Marburg, the Kuitheran Parish of St. Mary's Marburg, Elisabethschule Marburg and GreenVesting Solutions GmbH.

The **core team** from **Muñoz** comprises Dr. Jefferson Ongoco, June Mico and the engineers Armando Miranda and Joey Correa.

The **steering committee** in **Muñoz** also comprises representatives of a large number of institutions and organisations: the Association of Barangay Captains of Muñoz, Central Luzon State University, Philippine Rice Research Institute, TUBIG project, Municipal Agriculture and Fisheries Council, Christian Leaders' Association in Muñoz, senior citizens' association, Water Resources Management Centre, Casecnan Multi-Purpose Irrigation and Power Project, Philippine Carabao Centre, Muñoz Water District, science and technology division, Muñoz National High School, Institute for Climate Change and Environmental Management, office for senior citizens' affairs, barangay nutritionists and health workers, staff of kindergartens, municipal youth council, Department of Education, Catholic Women's League and the Parish Pastoral Council.

The second mission took place from 9 to 15 July 2017. This time a delegation from the University City of Marburg travelled to Muñoz. The purpose of this mission was to continue deepening the dialogue, enable the municipalities and local structures to get to know each other better, and **concretise the key areas already identified**. This is why in addition to the coordinator a specialist for solar technology and an expert in water management also took part in the mission. Prior to the mission, those responsible had already considered the use of solar energy, and photovoltaic systems in particular. The topics of rainwater retention and flood protection had also been discussed during the first mission, and the expert from Marburg took a close look at these issues during the second mission. A further key area discuss during the second mission was awareness of climate change mitigation in both municipalities, and how public awareness of these issues could be raised. The two sides used the period between the missions to discuss and agree on specific details of the programme of action. Unfortunately a third mission that had been envisaged, in which delegates from Muñoz would have visited Marburg, could not take place because there were problems obtaining exit visas.

Key measures of the programme of action

The two partner municipalities had already discussed thematic areas where they might work together during the kick-off workshop. Specific areas were then defined during the workshop that took place in conjunction with the first mission. The key areas were subsequently further concretised in the course of the project. These are:

- **Develop renewable energy** and reduce the use of fossil fuels, by introducing and increasing the use of solar power and hydropower
- **Develop flood protection** and rainwater management, by establishing rainwater retention and rainwater use
- **Raise awareness of climate change** among the following target groups: citizens, administrators, schools and universities

One important objective for both municipalities is to continue expanding renewable energy and to reduce the use of fossil fuels. Targets therefore include introducing or increasing the use of solar power and hydropower. One important measure in this context is to increase the number of

photovoltaic systems in both municipalities. For the Science City of Muñoz, one particular challenge here is the fact that these systems must be able to withstand very high wind loads (typhoons). A first measure will involve installing a pilot system in Muñoz.

In the City of Marburg one particular focus will be on increasing the ratio of photovoltaic systems. A solar cadastre has been in place here for several years. Public information events including the respective partner municipality are planned in order to make clear to citizens the global impacts of climate change, and demonstrate the benefits of renewable energy use.

Flood protection and rainwater management

were also identified as overarching objectives. In Muñoz, low-lying *barangays* often experience flooding. Over the last few decades numerous flood protection measures have already been implemented in Marburg, which were laid down for instance in water masterplans. Nevertheless, extreme high water events do occasionally lead to flooding even here. Further protection for property is therefore required in both municipalities. Some existing dikes need to be raised or rehabilitated, and additional dikes and flood protection walls need to be built. In Muñoz it would also be advisable to implement near-natural bank protection. This could be comprised of e.g. bamboo, high-growing trees with strong roots (in Marburg this usually means alders) or other natural materials.



Delegates from Marburg and ICLEI representatives visiting the Pantabangan Dam © Stadt Marburg

Rainwater management, involving rainwater retention and rainwater use, is also a joint overarching objective. The uneven distribution of precipitation across the year presents a challenge for both municipalities. In Muñoz, the monsoon season is followed by dry periods. Here, clay cisterns could be used in the same way as the rainwater drums commonly used in Germany to harvest rainwater, which can then be used during the dry season (off-grid water retention).



The delegation from Marburg taking part in the annual tree planting campaign in Muñoz together with representatives from the City of Muñoz and inhabitants of the *barangays* © Stadt Marburg

In Marburg too, climate change is leading to a shift in precipitation patterns. Increasingly, more humid winter months are being followed by periods of extreme aridity. Off-grid water harvesting would therefore be beneficial in Marburg as well. In public green spaces and parks, reservoirs could be constructed to store rainwater that could then be used for watering purposes during periods of drought.

One important issue for both partner municipalities is **raising awareness of climate change**. When we speak of awareness raising, we should remember that in Muñoz climate change mitigation and adaptation are already part of people's everyday lives. Large numbers of people take part in environmental and climate change mitigation activities. Planting and cleanup actions take place several times a year. These actions are events in their own right, and often take place in conjunction with competitions and fun activities. Climate change and climate change mitigation are topics that are also addressed in churches. Actions of this

kind cannot be transferred to the German context on a one-to-one basis. However, they do provide numerous ideas for the German municipality. Three target groups have emerged for awareness-raising: citizens, administrators, and schools and universities.

We envisage school partnerships, joint actions to raise public awareness (such as Earth Hour) and exchange between the universities. First measures have already been implemented. During the first mission the German delegation took part in a tree-planting action in which each of the German participants was able to plant a tree of their own. In the City of Marburg a 'climate partnership tree' was also planted, and a stela and a park bench put up. This ensemble will be inaugurated after the results workshop for the fifth phase of the project as part of an official meeting with members of the delegation from Muñoz.

3.5. Wernigerode – Hoi An

	Wernigerode (Germany)	Hoi An (Vietnam)
Population	33.000	92.000
Area	170 km ²	60 km ²
Possible or already noticeable impacts of climate change	<ul style="list-style-type: none"> • Torrential rainfall events • Storms • Dry periods • Invasive species 	<ul style="list-style-type: none"> • Flood events • Typhoons • Coastal erosion • Bank erosion • Groundwater salinisation

Profile of the climate partnership

Hoi An is located in central Viet Nam on the South China Sea, in Quang Nam Province. It is known for its well-preserved old town, which since 1999 has been recognised as a UNESCO World Cultural Heritage Site. Hoi An was once Viet Nam's most important commercial port, before it gradually silted up. The city is one of the most beautiful in Viet Nam, and is well frequented by tourists. Tourism is the main sector of the economy. Hoi An is located both on the coast and on a river delta (Thu Bon). It has a tropical monsoon climate and is badly affected by climate change. This is manifested in increasingly frequent torrential rainfall events, which become especially precarious when the monsoon coincides with a typhoon. As a result Hoi An suffers from coastal and bank erosion, and groundwater salinisation. The most recent flood occurred in 2017, when large areas of the city were under water.

Wernigerode is located in western Saxony-Anhalt, and is known as the 'picturesque town of the Harz region'. It too is an important destination for tourists. They come to see its well-preserved stock of pretty half-timbered houses, and are drawn to its attractive location in the low mountain landscape. Within its boundaries it includes parts of the Harz National Park, and the 'Brocken' – northern Germany's highest peak. It is a vibrant industrial and business hub. It is also home to education and research activities, with a student population of over 3,000. Wernigerode is located where the Harz mountains meet the foothills. More and more often it is experiencing torrential rainfall events. In July 2017, for instance, this led to flooding that caused considerable damage to property.

Since 2013, Wernigerode and Hoi An have been linked through an official twinning arrangement. This was the first official twinning arrangement between a German and a Vietnamese municipality. The partnership is supported by the Wernigerode Intercultural Network association. Several missions have already been undertaken. Cultural exchange activities have taken place, and citizens from Wernigerode regularly travel to Hoi An. The partnership agreement provides for cooperation in the field of environmental protection, among others. Wernigerode and Hoi An had already been engaged in climate change mitigation and adaptation activities for many years independently of each other. Participation in the Municipal Climate Partnerships project is deepening their partnership, and facilitating their engagement in this field. In 2016, together the two municipalities submitted a successful project proposal to the Partnership Projects for Sustainable Local Development (Nakopa) funding programme, which is managed by the Service Agency. To supply the ancient town of Hoi An, which is recognised by UNESCO as a World Cultural Heritage Site, with electricity, together the two sides installed a photovoltaic system on the roof of the tourism organisation, and inaugurated it in February 2018. The two municipalities are also working together beyond the field of climate action, however. They are currently developing a project for the joint training of specialists in the hotel industry, catering and geriatric care.

Designing the programme of action

Hoi An and Wernigerode had the major advantage of already having had a official twinning arrangement since 2013. The key actor in the dialogue is Huong Trute, a citizen of Wernigerode who originates from Viet Nam. She initiated the

twinning arrangement, and functions not only as a translator, but also as a mediator between cultures. She performs voluntary work in the Wernigerode Intercultural Network association, which is the municipality's key partner when cooperating with Hoi An. She forms part of the core team from Wernigerode, together with a staff member from the Office of the Mayor (Project Manager) and the municipality's Officer for Energy and Environmental Affairs. The core team from Hoi An comprises one staff member from the Office of the People's Committee, plus two staff members from the Office for Environment and Natural Resources.



February 2018 saw the installation of the photovoltaic system in Hoi An, which was supported by Engagement Global/the Service Agency. © Lothar Anderl

The mission delegations from Wernigerode included the Wernigerode Intercultural Network, as well as representatives of the municipal council and the utilities. The delegations from Hoi An comprised representatives of the Urban Planning Department, the utilities, the Business Development Department and others. Through the ongoing Nakopa project to install a photovoltaic system in Hoi An, the local Centre for Culture and Sports was also closely involved.

Time and time again, the language barrier proved difficult. The actors involved significantly underestimated the translation work involved for the project as a whole, and particularly for the Nakopa project. Only one individual on each of the teams spoke good English. Most of the time Huong Trute translated from Vietnamese into German and vice versa. First of all she was not able to take part in all elements of the programme and meetings.

Secondly, this made it more difficult for her to make a meaningful contribution. For the mission to Wernigerode the Service Agency helped organise a professional interpreter. During the missions to Hoi An, in Huong Trute's absence things were first of all translated from Vietnamese into English, then from English into Germany, and vice versa. This made communication considerably more difficult, and was considerably more time-consuming.



In July 2017 the delegation from Hoi An also took the opportunity to visit Wernigerode Castle. © Stefan Streichert

Nonetheless the cooperation was cordial, intensive and productive. The two sides used the first mission basically to get to know each other, and familiarise themselves with each other's situation. It quickly became clear that this knowledge and mutual understanding in this area would not have been possible to the same extent within the framework of the 'normal' twinning scheme. During the first mission to Hoi An, stormy weather provided a clear demonstration of the impacts of climate change on coastal erosion. The delegation from Wernigerode were able to see with their own eyes how parts of the sandy beaches, including palm trees, were swept into the sea. Although Hoi An continuously replenishes the beaches, entire sections have had to be concreted. This trend is threatening not only the livelihoods of the local inhabitants, but also the main sector of the economy – tourism.

Key measures of the programme of action

Hoi An and Wernigerode are facing the challenges together, and taking measures in partnership. As they work together, the two municipalities are growing in mutual understanding and learning from each other. One milestone and first success story that we should emphasise is the joint installation of a photovoltaic system on the roof of the



February 2018 saw the inauguration of the photovoltaic system in Hoi An, which was supported by Engagement Global/the Service Agency. © Katrin Anders

tourism organisation in Hoi An, which received financial support from the Nakopa programme. Both municipalities are attempting to recruit institutions, businesses and broad sections of the population as supporters. Their aim is to place climate change mitigation and adaptation on a broad footing.

The key topics of the joint programme of action are:

- Switching to **renewable energy/energy efficiency**
- **Solid waste management and reduction**
- **Public relations/awareness-raising measures**
- **Sustainable tourism**
- Promoting **green infrastructure**
- Developing **cultural exchange, tourism and business**

One strategic objective is to increase renewable energy use and raise energy efficiency. Hoi An has set itself the target of increasing renewable energy use by 30 per cent to 2030 (baseline year 2018), while Wernigerode intends to double its figure (baseline year 2012). To help achieve this, even before entering into the climate partnership

the two sides had already submitted a project proposal to the Service Agency under the Partnership Projects for Sustainable Local Development programme. Funding was approved in August 2016. The partners jointly implemented the project 'Switching to environmentally-friendly solar technology for street lanterns and PA systems in the world heritage zone of Hoi An city, and raising awareness of environmentally-friendly energy management among citizens and tourists'. A renewable energy specialist from Wernigerode supported the installation, and advised and trained responsible technicians in Hoi An. The photovoltaic system on the roof of the tourism organisation, which has 172 modules and a nominal power of 55 kilowatt peak (kWp), was ceremonially inaugurated in February 2018 as part of a three-day festival. Hoi An hopes that this will lead to greater use of renewables. For example, it is planning to use PV technology to power the irrigation schemes in the tourist vegetable villages; it also plans to install PV systems on schools and public buildings.

A further strategic objective is to **reduce the volume of solid waste** in both municipalities, and organise a waste management system that runs smoothly (Hoi An). There are plans for an expert exchange involving the Waste Management Department of the District of Harz, a joint jute bag advertising the topic and the partnership, and activities to raise the efficiency of the municipal composting plant (Hoi An).

Both municipalities consider it important to raise public awareness and involve citizens. This is why they both maintain a solar roof cadastre, offer energy counselling free of charge, and give out awards to exemplary citizens, businesses and others for their engagement in the field of environmental protection. A further priority for both municipalities is promoting green infrastructure. Wernigerode has been involved in nature conservation for many years, and is currently developing an ecological green space management system. The 'tree sponsorships' project was transferred from Wernigerode to Hoi An, where over 20 trees have already been planted thanks to donations from citizens of Wernigerode. Both municipalities intend to develop exhibitions on the climate partnership, as well as environmental education activities such as brochures and teaching units in Hoi An, or a 'green classroom' at the Harz Museum in Wernigerode. To take this further a school partnership has been

launched between Kim Dong Secondary School and the Gerhart Hauptmann Grammar School.



In October 2016, donations made by citizens of Wernigerode were used to establish the first tree sponsorships in Hoi An.
© Nguyen Thanh Son

Both municipalities attract large numbers of tourists and are committed to **sustainable tourism**. For instance, they give out awards to tourist enterprises that are committed to protecting the environment. In the promotion of **sustainable mobility** Hoi An is a shining example, as a large proportion of accommodation providers loan bikes to tourists free of charge. Public transport for tourists is realised using 43 electric vehicles. Once the ongoing test phase is complete, Hoi An will be advising Wernigerode on this.

The joint programme of action drawn up within the municipal climate partnership is not only exemplary with regard to development cooperation and joint engagement for climate change mitigation and adaptation. It is also boosting the official twinning arrangement and raising it to a professional level. It will be possible to use the lessons learned from the cooperation for other areas of the twinning arrangement (such as the joint training of specialists in the hotel industry, catering and geriatric care).

4. CONCLUSION

The fifth phase of the Municipal Climate Partnerships project was the first one to focus on Southeast Asia. So far there have been very few partnerships between German and Southeast Asian municipalities. Consequently, one particular challenge was the fact that partnerships had to be established from scratch as part of the project, or that existing links had only existed for a relatively short period of time. On both sides, it was primarily small and medium-size municipalities that took part.

One thing that all the municipalities have in common is that they are already affected by the impacts of climate change, albeit to different degrees. Extreme weather events such as torrential rainfall, storms or unusual dry spells, higher temperatures or a shift in the annual or rainy/dry seasons, are the phenomena described most frequently, while floods are one of the most devastating impacts. What problems the various municipalities tend to face depends on where they are located. Municipalities in coastal regions tend to face the erosion of coastal areas and particularly strong typhoons. The German municipalities tend to report increased heat in the summer and torrential rainfall events.

Of the municipal partnerships taking part in the fifth phase of the project, two already existed before joining the project, while three of the climate partnerships were established from scratch. All the latter are German-Philippine partnerships. In these three cases the **Southeast Asia Secretariat (SEAS) of Local Governments for Sustainability (ICLEI)** played a special role in bringing the two sides together. The Secretariat is based in Manila in the Philippines. This meant that ICLEI already had some links to Philippine municipalities that could be recruited for the climate partnerships project and successfully partnered with Ebhausen, Marburg and Herdecke. These three partnerships met for the first time at the kick-off workshop in Muñoz. The two German-Vietnamese partnerships were able to build on official agreements and links that already existed, albeit recent ones. Consequently, the major challenge for all partnerships was to establish within a relatively short period

a sound professional and organisational basis for further cooperation.

Regarding the **working structures**, coordinators and core teams have been appointed in all the municipalities. In most cases steering committees were also set up that met several times during the course of the project. The composition of the various bodies varies according to the specific situation of each particular municipality. In almost all the municipalities, however, they involve a range of actors including policymakers, administrators and civil society stakeholders, which has enriched the process of exchange and placed the cooperation on a sound and broad footing. The coordinators and core teams include both representatives of departments for international affairs, and departments for the environment or climate action. Particularly in the smaller municipalities where these departments do not exist, (voluntary) councillors and mayors themselves make a major contribution. In the German-Vietnamese partnerships there are private sector stakeholders (in the case of Berlin Lichtenberg – Hoan Kiem) that are based in both municipalities, or private individuals (in the case of Wernigerode – Hoi An) who act as translators/cultural mediators.

Universities and research institutions are relatively well represented on the steering committees, which creates attractive opportunities for in-depth analysis of specific aspects of project content. Several partnerships also have specific cooperation agreements with universities. One example is Ebhausen – Lubang. In the climate partnership between the Science City of Muñoz and the University City of Marburg, universities play a special role in linking the two sides. In all the partnerships, schools and school students are recognised as important stakeholder groups. The climate partnerships envisage the establishment of school partnerships and increasing the involvement of these stakeholder groups in their activities.

To ensure political backing, in those cases where councillors are not already directly involved themselves, the coordinators regularly update the political decision-making bodies on the progress

made. The reciprocal visits made by the delegations from the respective municipalities provided particularly suitable opportunities to do this. These mutual exchange visits and the international kick-off workshop were also used to raise public awareness of the climate partnerships and what they were all about, for instance through press releases and announcements on the websites of the municipalities.



Partners presenting their stakeholder landscapes during the kick-off workshop in Muñoz, Philippines © Judd Tolosa

Designing the programmes of action was not always a continuous and linear process. In some cases, shortages of human resources led to long interruptions. The language barriers presented a challenge for communication, and continue to do so. This is the case particularly with the German-Vietnamese partnerships. As a result, the Service Agency needed to provide translation and interpretation services. Nonetheless almost all the partnerships found creative solutions, which often included the involvement of voluntary associations or committed private individuals. This will be a key prerequisite for continuing the cooperation.

As in the previous phases of the project, in this phase too professional dialogue on the lessons learned, strategies and needs led to a rapid identification of key areas that were of interest to both sides. The reciprocal missions were particularly important elements of this process. The Southeast Asian partners often highlighted the links between climate change and improving the lives and incomes of the local population. In the German municipalities, special importance was attached to

raising awareness and motivating citizens to adopt climate-friendly lifestyles.

The programmes of action that were the outputs of this intensive process, which were presented one by one in the previous section, are characterised by a hierarchical structure (strategic objective – target – measure), and are clearly structured by specifying responsible individuals, time frames, resources required and indicators. This provides an excellent basis for implementation. One factor contributing to this is the fact that the programmes of action sometimes include both larger-scale, resource-intensive projects, and measures that can be tackled independently of external funding. The latter can be based on the existing human, material and financial resources, and expertise, available to various actors. As well as measures that are planned to be implemented over the next one to two years, there are some medium-term targets. The planned resources and indicators have been defined in detail chiefly for those projects already prioritised for immediate implementation. For other measures, however, some of the information is still of a rather general nature, and will be elaborated in more detail once the municipalities plan to submit a funding proposal. Given the highly diverse situations and dynamics in the partnerships, the degree of detail with which the programmes of action have been drawn up in some cases varies widely.

The **key areas selected** always reflect the specific situation and needs of the two partner municipalities concerned. Overall, the following topics were selected most often:

- Awareness raising and environmental education
- Renewable energy and energy efficiency
- Sustainable mobility
- Sustainable agriculture
- Sustainable tourism
- Water/wastewater treatment

The majority of the targets and measures that involve building or expanding infrastructure or using particular technologies will be implemented in the Southeast Asian municipalities. Here the German municipalities will support their partners by providing professional advice and joint project management (including advice on submitting project proposals for funding). There are also several ‘parallel projects’ that will be implemented in both

municipalities in similar ways. Examples include measures for urban greening and mobility. Awareness raising, education and public information work are very important in all the municipalities. Among other things, the German municipalities intend to use the massive impacts of climate change in their partner municipalities to raise awareness of global interdependencies, and to boost the engagement of their own citizens.



A delegation from Berlin-Lichtenberg visiting Hoan Kiem in Viet Nam, seen here travelling on local electric buses
© Bezirk Berlin-Lichtenberg

In some climate partnerships, **implementation of the programmes of action** has already commenced. Two projects are being executed with support from the Service Agency's Nakopa programme. Others are planned for late 2018/early 2019. The fact that implementation is being tackled so vigorously this early on will raise the profile of the climate partnership and motivate everyone involved. No one should lose sight of the wider context of the programmes of action, however. The longer time frame and broader framework of the programmes of action will enable the municipalities to build on these individual measures through follow-on projects and complementary measures in the same area of activity, or other areas. This will lay the foundations for both broader and more sustainable results, and the long-term continuation of the climate partnership.

5. OUTLOOK

Our municipal climate partnerships were a response to the trajectory of the United Nations climate change conferences from Copenhagen in 2009 to Bonn in 2017. The idea that gave birth to the Municipal Climate Partnerships was closely linked to the failure of COP 15 in Copenhagen. By facilitating the bilateral design of the joint programmes of action for climate change mitigation and adaptation by the German municipalities and their partners in the Global South, we wanted to send a message. Our message was that global climate change – and its impacts that are already with us today – can only be tackled successfully in cooperation with all stakeholder groups in the North and the South. At COP 23 in Bonn in 2017, the first Climate Summit of Local and Regional Leaders took place within the official conference zone. This reflected the growing importance and international recognition of local and regional authorities.

Having embarked on the sixth phase of the project we are now looking at some 60 climate partnerships. They are sending a clear signal that we can increase the momentum for participatory climate change mitigation and adaptation by working together as equal partners.

In the fifth phase of the project the partners made it from the islands and coastal strips of the Philippines to Hanoi, the capital of Viet Nam, and in Germany got to know urban Berlin, the landscape of the Harz region, the northern Black forest, the Ruhr region and central Hesse.

The partnerships between the municipalities and the people involved in them are already in themselves a tremendous gain for all those who joined us on this journey. We believe that stopping climate change is a joint task for North and South. The impacts of climate change are global and do not stop at borders. The programmes of action jointly developed by the climate partnerships are driven by this vision.

On this firm basis, the aim going forward is now to make the climate partnerships sustainable and enable them to implement the targets and

measures that they have set themselves. In this context it seems important that the programmes of action should be integrated into the daily routines of the municipalities concerned, and that the municipalities should regularly report on the programmes of action and update them. Both within the administration and at the meetings of the policymaking bodies, the relevant actors should report on the progress of implementation and any obstacles encountered. They might do so for instance in the progress reports on municipal masterplans for climate action. Furthermore, the programmes of action should be seen as dynamic documents to be reviewed and further developed at regular intervals.



Environmental measures in Muñoz, supported by Marburg
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Both municipalities share equal responsibility for short-, medium- and long-term **implementation of the planned measures and projects**. Here it is imperative that the actors involved in the climate partnership municipalities transfer knowledge systematically. To ensure this knowledge transfer, regular dialogue should be guaranteed so that the programmes of action can be updated, and continuously supplemented with fresh knowledge and expertise. In this context it will be crucially important to maintain a smooth flow of communication and keep the working structures vibrant. Administrators should make it a priority to ensure that the work of the climate partnership

is managed not just by one individual, so that cooperation is not interrupted when people are assigned to new positions with different responsibilities.

Numerous measures of the programmes of action elaborated are also vitally dependent on the involvement of external stakeholder groups. Consequently, in the future it will be even more important to see civil society groups, academia and the private sector as partners for success, and therefore to seek and maintain links transparently.

When **realising the joint objectives** in the climate partnerships the question of available resources will always crop up. A large number of the projects described in the programmes of action are ambitious and cost-intensive, whereas others can be implemented by mobilising engagement within the municipality and involving partners in innovative ways. The time lines envisaged within the programmes of action already reflect a first set of priorities. Often, however, several measures are planned for launch within a relatively short time frame. The two partners should therefore agree the level of priority and time frame within which these measures can be realised, in order to avoid either side becoming overstretched.

The high-quality proposals for increasing renewable energy use and energy efficiency, the preventive measures to avert or mitigate the impacts of climate change, and the education projects, all of which were developed with considerable expertise and documented in the programmes of action, provide an excellent platform on which to apply for financial support from public and non-governmental funding bodies alike. They are based on a joint analysis, a profile of strengths and weaknesses, and specific joint objectives. The Service Agency and LAG 21 NRW will be glad to continue supporting the climate partnerships in their search for ways of funding the implementation of their measures in the future. The two agencies will also continue to provide the climate partnerships with professional and methodological support for implementing the programmes of action, albeit with less intensity than hitherto. Based on the model adopted in the previous phases of the project, an annual network meeting of the German municipalities has already

been agreed. Furthermore, through many other relevant programmes the Service Agency (as Germany's competence centre for municipal development cooperation) and Engagement Global (as an umbrella organisation) will continue to offer municipalities and civil society stakeholder groups a range of advisory and other support services that they can use to further develop their municipal climate partnerships. Several of these programmes were already presented to the municipalities one by one at the network meetings in Germany. They include Nakopa, the Fund for Small-Scale Municipal Development Cooperation Projects, and the Experts for Municipal Partnerships Worldwide programme run by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and the Service Agency.

Over the next few years the Municipal Climate Partnerships project will be further expanded and institutionalised for the participating municipalities through advisory service offerings. A new call for proposals has already been published. Interested municipalities are welcome to contact the Service Agency or LAG 21 NRW at any time to find out more about the opportunities for joining the project.

PUBLICATIONS OF THE SERVICE AGENCY COMMUNITIES IN ONE WORLD

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All publications and information leaflets of the Service Agency Communities in One World can be ordered free of charge (if not yet out of print) or downloaded on its homepage under [https://skew. engagement-global.de/publications-en.html](https://skew.engagement-global.de/publications-en.html)

Please find below the list of publications available in English.

Dialog Global-Series:

- No. 43: Network Meeting Migration and Development at the Local Level. 9-10 November 2015 in Cologne. Report. Bonn, October 2016
- No. 40: 50 Municipal Climate Partnerships by 2015. Documentation of the third phase of the project. Bonn, May 2016

Material-Series:

- No. 98: Third European Network Meeting „Migration and development at the local level: Sharing experiences and creating ideas“. 28 to 29. November 2017 in Cologne. Bonn, September 2018
- No. 96: First conference on municipal partnerships with Eastern Europe. 23 to 25 October 2017 in Esslingen. Bonn, March 2018
- No. 95: Second Conference on Municipal Partnerships with Asia, 19 to 21 June 2017 in Bonn. Bonn, November 2017
- No. 90: Second European Network Meeting Migration & Development at the Local Level: Linking Actors and Policies. 29th -30th November 2016 in Cologne. Report. Bonn, August 2017
- No. 86: International Kick-off Workshop, 5. Phase „50 Municipal Climate Partnerships by 2015“. 12th-14th July 2016 Science City of Munoz, Philippines. Documentation. Bonn, March 2017
- No. 85: Third Conference on Municipal Partnerships with Africa - Sustainable Partnerships on Equal Terms, 19 to 21 October in Erfurt, Documentation. Bonn, March 2017
- No. 80: German-Latin American/Caribbean Mayors' Conference – 'Urbanisation in Germany', Hamburg, 30 to 31 May 2016. Bonn, November 2016
- No. 77: Second Conference of German-Palestinian Municipal Partnerships. 10 to 13 November 2015 in Jena. Bonn, July 2016

Other publications:

- About us. Bonn, September 2018
- The services we offer. Bonn, January 2019

Supporters and cooperating partners - The shareholding structure of the Service Agency

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The programme commission



The programme advisory board



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