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Environment, Nature Conservation,
Building and Nuclear Safety

Achieving aims together

The Federal Environment Ministry's International Climate Initiative
Review of Activities 2015 to 2016

Imprint

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Interview with the Federal Environment Minister

Minister Hendricks,

in your opinion, which milestones in international climate and biodiversity protection have shaped the International Climate Initiative's work (IKI) in 2015 and 2016?

The 2015 Paris Climate Agreement is of special significance in this context because the decisions associated with it entail major new developments. The international community has agreed to limit global temperature rise to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees. And we have managed to eliminate the so-called 'firewall' between industrialised nations on the one hand and emerging economies and developing countries on the other.

All countries must contribute according to their own capacities. We have formalised a periodic review of the national contributions in what is known as the 'ambition mechanism'. This is also consistent with the spirit of the 2030 Agenda and its 17 Sustainable Development Goals adopted by the United Nations in New York in 2015. It also contains obligations for all countries. It is essential that we continue to capitalise on the positive energy evident in Paris and New York and make sure the Climate Agreement becomes a living reality.

What's more, Germany already formulated its Nationally Determined Contributions in the Climate Action Plan 2050, which we presented at the follow-on conference to Paris in Marrakech in 2016, and initiated implementation of the 2030 Agenda by updating the National Sustainability Strategy in 2016.

Another milestone was the 2016 Habitat Conference, which once again highlighted the importance of cities in the climate and sustainability context. Cities are considered one of the main sources of emissions and, as urbanisation advances, the contribution that cities make to sustainable development is becoming increasingly important.

Finally, in the area of biodiversity, the conference in Cancún in 2016 showed that we urgently need to take effective measures to halt the loss of biodiversity. We need resilient ecosystems that continue to provide vital services for human beings. We can only combat the causes of biodiversity loss through joint efforts in areas such as sustainable management of agriculture, forests and fisheries.

What specific initiatives and projects did you launch after the Paris Conference to ensure that the ambitious climate targets set by the individual countries are also achieved?

The Paris Agreement entered into force faster than any other multilateral agreement in history. We are very pleased about this – all the more so because Germany played a part in that by ratifying the agreement in October 2016.

A core element of the agreement is what is known as the Nationally Determined Contributions (NDCs) set by the individual signatories. In conjunction with the Federal Ministry for Economic Cooperation and Development (BMZ) and Morocco, we initiated a partnership for implementation of the NDCs with developing and industrialised countries and emerging economies. The aim is to improve coordination of support services in the countries, improve access to financial support for implementation of the NDCs and improve access to knowledge for developing countries.

After Paris, we focused with the IKI on projects that support implementation of the NDCs.

Which newly approved IKI projects in 2015/2016 do you think stand out in their approach to climate change mitigation and biodiversity conservation?

The IKI pays special attention to innovation and sustainability when selecting and monitoring projects. What is essential is the shift to carbon-neutral and resilient development that is rich in biodiversity. Personally, I was pleased about the visit to China

and the signing of the joint declaration on the Sino-German Urbanisation Partnership in 2015. I was also impressed by my trip to Rwanda in 2016, where I was able to see first-hand the success of an IKI project that seeks to stabilise important ecosystem services. The project promotes sustainable farming practices as well as conservation and reforestation measures. Working together with the Rwandan Environment Minister, Vincent Biruta, and the Environment Minister from El Salvador, Lina Pohl, we launched the first concrete South-South cooperation to restore forests.

How has the BMUB contribution to funding climate change mitigation and biodiversity conservation developed over the last two years?

The German federal government has fulfilled its commitments to mitigate climate change and conserve biodiversity. And it has made a clear commitment to further expanding our activities. In 2020, we aim at providing four billion euros of public funds for climate financing – twice as much as in 2014.

In the area of biodiversity, in 2014 the international community agreed to double international financial flows by no later than 2015 and to maintain this financial commitment at at least the same level until 2020. Germany has achieved this goal, and we will also meet this obligation in the coming years.

With a total volume of 870 million euros in 2015 and 2016, the IKI is an important instrument towards fulfilling our commitment to negotiation and action. This applies above all to supporting many countries in developing their Nationally Determined Contributions because this is an important factor driving the success of the Paris Agreement. It is also, however, evident in the concrete implementation of the New York Declaration on Forests which aims to halt forest loss by 2030.

Dr Barbara Hendricks
Federal Minister for the Environment, Nature Conservation, Building and Nuclear Safety

The International Climate Initiative (IKI) 2015/2016: Achieving aims together

Climate change and biodiversity are now at the top of the national and international agenda. At conferences worldwide, particularly innovative or successful projects designed to mitigate climate change and conserve biodiversity are presented. Many of these successful projects are closely linked to the Federal Environment Ministry's IKI, meaning they are directly funded by the IKI or associated with it through partnerships. This annual review of activities seeks to show why so many projects initiated by the IKI are sharing their success stories, challenges and experiences at international conferences and what special quality sets them apart. A core element of the IKI is the application of a bottom-up approach in which outlines are submitted in a competition of ideas.

Four areas – one philosophy

IKI's activities fall into four funding areas: mitigating greenhouse gas emissions (GHG), adapting to the impacts of climate change, conserving natural carbon sinks and conserving biological diversity. Synergies between climate protection and biodiversity conservation play an important role in all four areas. When selecting the projects to be funded, the IKI takes into account the same criteria of excellence across all funding areas. This includes an assessment of the project concepts and provider structure as well as partners, institutionalisation and project environment.

This aims to ensure that IKI projects provide the best possible support for and accelerate transformational change. The goal is a long-term


Mitigating greenhouse gas emissions


Adapting to the impacts of climate change


Conserving natural carbon sinks/REDD+

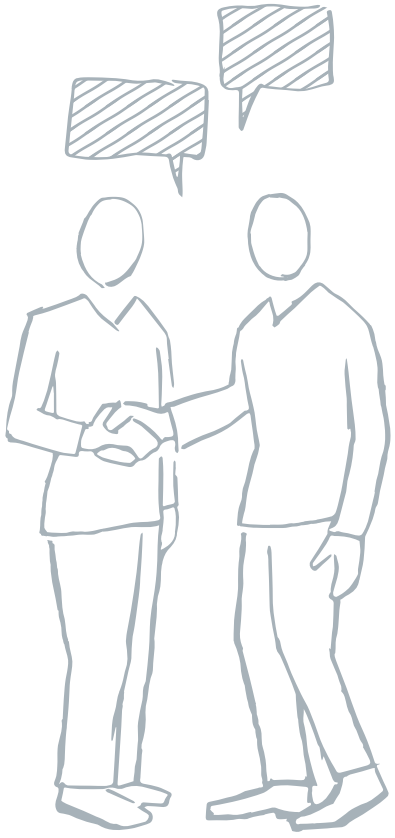

Conserving biological diversity

and very ambitious structural change which involves new development paths leading to forward-looking economies and social systems. This is the only way to achieve the ambitious targets stipulated in the Paris Climate Agreement: limit global warming to two or even 1.5 degrees Celsius over pre-industrial levels. It is the only way we can implement the ambitious Convention on Biological Diversity's Strategic Plan 2011 to 2020. The degree of innovation is also significant: the IKI seeks to take calculated risks in order to come up with new, more efficient, effective and better-adapted solutions. The idea is to make relevant contributions to negotiations and processes within the UN Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). The cornerstones of 'action' and 'negotiation' are to be optimally linked with one another: through exemplary implementation of resolutions into practice or by carrying out pilot projects and testing concepts as a basis for further negotiations. Not least of all, successful candidates for IKI projects also need to furnish evidence that project outcomes and impacts are sustainable, in other words long-lasting, and that they make broad dissemination and replication of the selected approach possible.

By organising annual calls for proposals, the IKI can react to new developments with agility and flexibility, thus combining a binding basic orientation with a prompt pragmatic response – an important contribution in the interaction between climate and biodiversity actors.

Action and negotiation

A key event that took place in the period between 2015 and 2016, the years on which this report is based, has undoubtedly been the Paris Climate Summit. The IKI did its part to ensure that the international community was able to reach a breakthrough agreement. It offered advisory services far in advance of the crucial days of negotiation in November and December 2015: already in the run-up, the IKI actively supported those responsible at local level in developing Intended Nationally Determined Contribution (INDCs) through the organisations it funds all over the world. Priority was given to ensuring that the goals are both ambitious and realistic. This gave actors the security that the targets they were proposing would subsequently result in feasible Nationally Determined Contributions (NDCs). The high quality of these drafts was instrumental in bringing the negotiations to a successful conclusion.



Based on these concrete negotiation results, the next phase of support from the IKI is now getting underway: the NDCs are being translated into reality. Here IKI projects can link work results and local partner networks that emerged during the INDC development phase. As a result, grounded solutions will be produced in close cooperation with innovative players, which can be implemented quickly and with good prospects of success. This is vital because the clock is ticking: the NDCs are already scheduled to be reviewed again in 2018.

Partnership for success

When defining their NDCs, many countries are setting climate targets for the first time in their history – an ambitious process which also requires a solid institutional base. It is of vital importance that the countries concerned rapidly strengthen their structures, develop financial instruments and create possibilities for transparency and evaluation. In this context, support is provided by the global NDC partnership which was launched by the Federal Ministry for Economic Cooperation and Development (BMZ), BMUB and Morocco at the Climate Change Conference in Marrakech at the end of 2016 in conjunction with many other partner countries. It brings together governments, institutions and research facilities to develop and coordinate appropriate measures and bring them into alignment with existing climate and development goals. This complementary approach ensures that the NDCs are implemented in a constructive and coordinated fashion, with a largely common understanding and according to uniform principles. A consistent approach that incorporates different actors and policy areas into the strategies of IKI projects also facilitates 'mainstreaming', that is the systematic integration of biodiversity conservation and climate change mitigation into policies, strategies and practices of public and private stakeholders. Environmental and development policy, two fields that are often still considered separately, will become more integrated. The broad cross-sectoral cooperation, however, also makes it possible to initiate and implement private climate and biodiversity financing more easily. The IKI actively contributes to the NDC partnership through, among other things, the NDC support cluster.

IKI as a guide to the future

But there are also flagship projects in the IKI's other work areas, the success of which resonates around the world. An example of this is Ecosystem-based Adaptation (EbA), an approach that focuses on the conservation of natural resources and their dependent ecosystem services, either to supplement or replace other adaptation measures. In contrast to traditional approaches in the area of natural resource and biodiversity management, EbA explicitly focuses on current and future climate variability and its impacts on people and ecosystems. The concept, which the IKI has played a major part in shaping, has proven successful internationally and is now being used on a large scale by a variety of different actors.

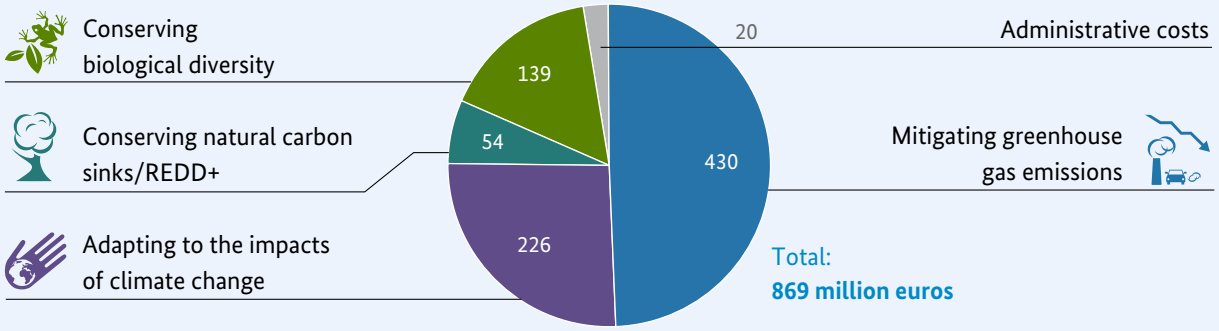
In the area of international forest protection, the IKI was involved in the implementation of the international REDD+ (Reducing Emissions from Deforestation and Degradation) regulations to reduce emissions from deforestation and forest degradation in developing countries. It supports partner countries in the development and implementation of innovative solutions to preserve, sustainably manage and restore forests. In particular, the IKI headed up efforts to establish national systems for environmental and social security clauses, known as 'safeguards'.

Commitments: 719 million euros
Doha accounting method: 869 million euros

Both methods of calculation presented in the tables of the following page relate to the 2015 to 2016 period. The commitments are the legally binding (budgetary) funds for the year in question. It refers to the total volume of the budget (expenditures/definition and commitment appropriation/ precommitment) for an approved/ commissioned project in the commitment year; it includes the expenditures/specifications in the commitment year and the commitment appropriations/ precommitments. Reduced expenditures in the commitment year are included as long as they have not already been counted as precommitments. The Doha accounting method was selected to convey the importance of the energy and climate fund (ECF) more transparently over a longer period. This means that bilateral projects from the IKI were counted as commitments, and bilateral projects from the ECF and multilateral contributions were counted as expenditures in the 2015 to 2016 period.

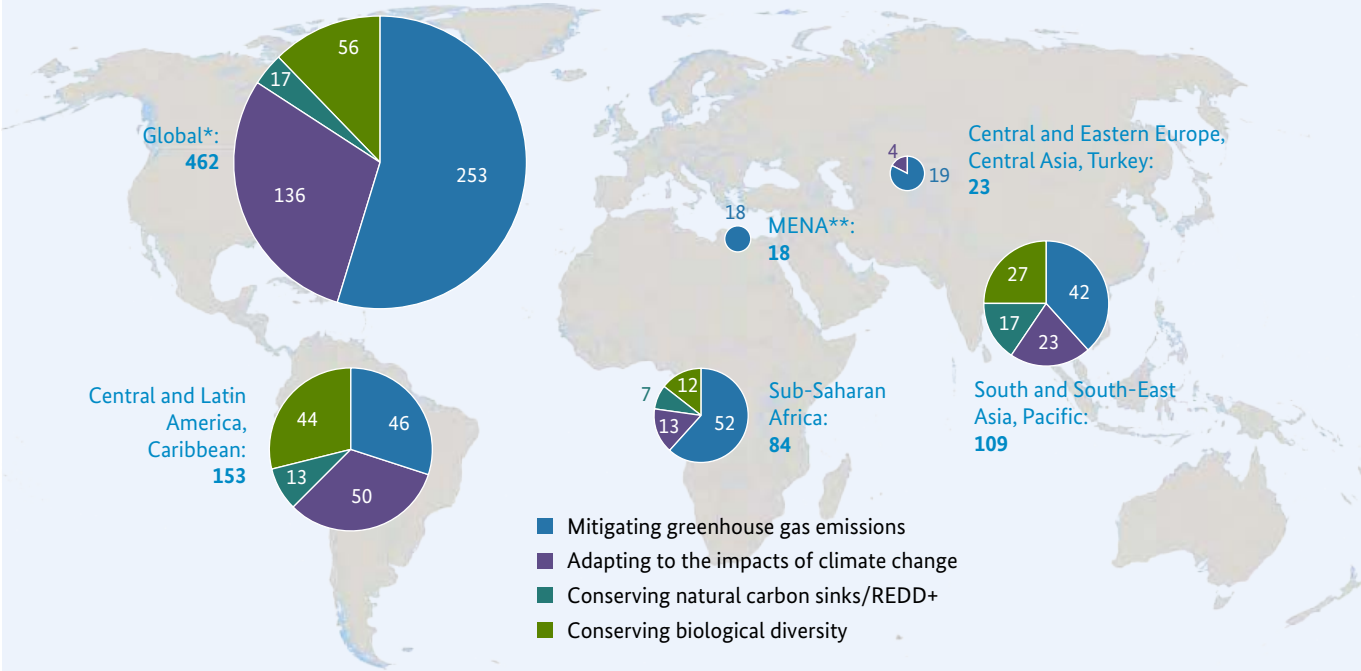
The Panorama online platform, which was jointly initiated by the IKI and other partners, describes best practices in the field of biodiversity and showcases successful solutions for the global protection of terrestrial and marine ecosystems. Practitioners are recognised for their successes on Panorama but can also learn from one other and get suggestions for solutions to similar problems. Most recently, a component for EbA was added to the platform and its target audience is being continuously broadened.

IKI project volume by funding area (2015 to 2016, in million euros) according to Doha accounting method



Source: BMUB | The distribution by comittment is as follows: Mitigating greenhouse gas emissions: 367 million euros; Adapting to the impacts of climate change: 211 million euros; Conserving natural carbon sinks/REDD+: 53 million euros; Conserving biological diversity: 69 million euros. This accounting method is used for international CBD reporting.

IKI project volume by region (2015 to 2016, in million euros) according to Doha accounting method



Source: BMUB | *Global projects are active across several countries and in more than one region, whereas regional projects include more than one country in the same region. Bilateral projects focus in one country only. | ** MENA = Middle East and North Africa

The solar thermal energy plant Noor I (Arabic for light) in Morocco utilises a pioneering technology for more effective climate change mitigation and low-carbon electricity generation.

Mitigating greenhouse gas emissions

Active in many areas – from renewable energy and urban planning to climate-friendly public procurement

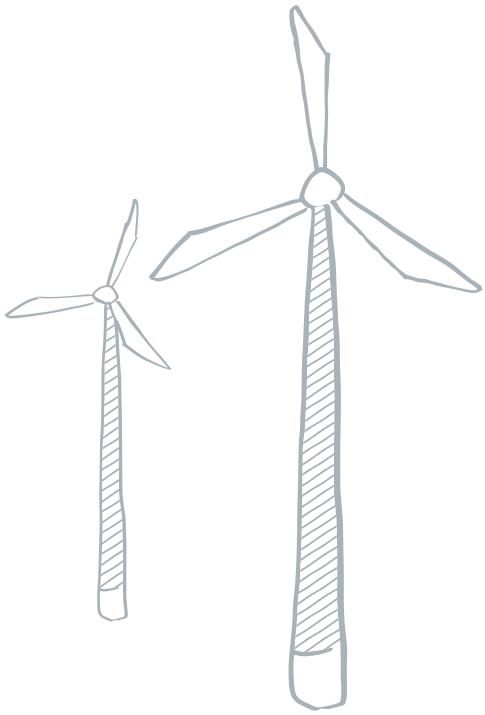
If the aim is to keep the global temperature increase to well below 2 degrees Celsius and even undertake efforts to limit the rise to below 1.5 degrees, we must fundamentally restructure key aspects of the economy and society. And we must quickly learn to live without oil and coal. The IKI helps partner countries establish low-emission economic structures and supply systems. These include the use of renewable energy, an increase in energy efficiency, a reduction in fluorinated GHG (F-gases), which are extremely harmful to the climate, and sustainable urban planning. Further fields of action include the development of climate-friendly mobility and waste management strategies and concepts, but also the conservation of natural carbon sinks, particularly forests and peat bogs.

Many countries make their obligations arising from the Paris Climate Agreement contingent on financial and technical support as well as on assistance for adaptation and forest protection activities. Even though NDCs are national climate change mitigation contributions, they can be put into practice more quickly with international support. This is why BMUB set up an international NDC support cluster. All activities that pertain to specific areas such as financing, data transparency or sectoral issues can be planned and optimised across countries, thereby harnessing synergies and preventing duplicate funding. In addition, the partners in the target countries also receive guidance so they know which proven approaches and instruments they can use to implement their climate goals and under what circumstances.

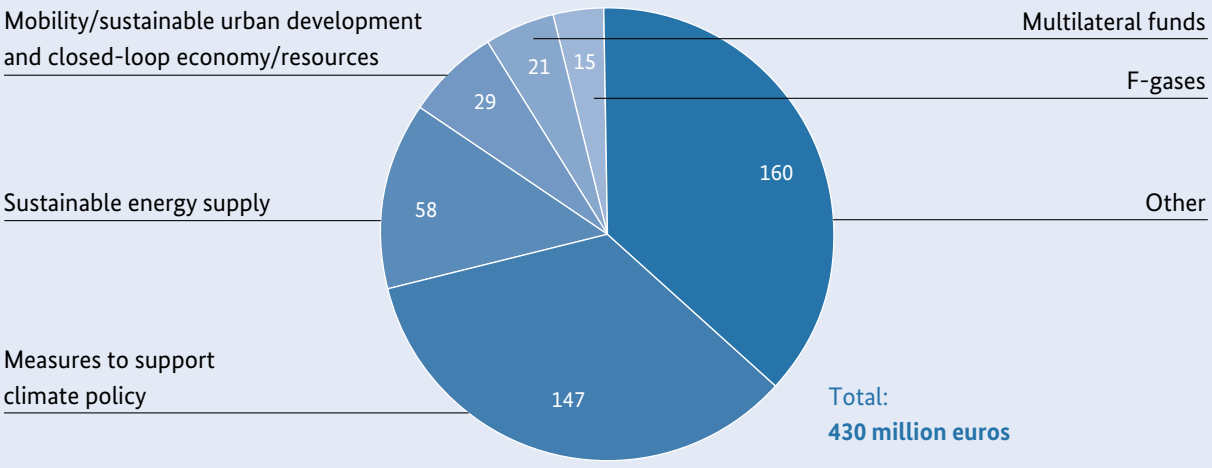
The competent ministries in the partner countries receive advice and training to ensure that they can develop strategies and concrete plans to mitigate GHG. Measurement, reporting and verification (MRV) of mitigation measures are key elements in a successful mitigation policy. In addition, a well-organised system of budgeting and accounting is an indispensable part of managing international funding and tapping into additional funding sources – which is why there is a whole range of project activities in this area funded by the IKI.

The IKI supports the establishment of national climate structures and capacities, for example in India, Brazil and South Africa, and focuses more on the increasingly important level of implementation in regions and cities. In the process, projects transfer successful efficiency technologies, such as combined heat and power plants to Chile and various solar technologies to India, support environmentally friendly and energy-efficient cooling systems on islands, and teach the financial sector in various Asian countries about the opportunities and risks of sustainable investment.

In terms of mitigation, the current IKI support programme focuses on projects that will have an impact before 2020. These projects fall into the sectors of renewable energy and energy efficiency, environmentally-friendly cooling/F-gases, sustainable urban development, mobility and transport. Issues related to production and consumption are also of relevance here. They are addressed in projects concerned with the circular economy and resource efficiency.



Area I – Mitigating greenhouse gas emissions (2015 to 2016, in million euros) according to Doha accounting method



Source: BMUB | Total funding volume according to accounting method by commitment: 367 million euros

Traditional broom grass helps stabilise soil and provides additional income when it is sold. In this way, adaptation measures not only help prevent the impacts of climate change but also create new opportunities.

Adapting to the impacts of climate change

Working with nature – not against it

Adaptation to climate change means adjusting to changes in the climate that have already occurred – in particular higher temperatures, dry periods, rising sea levels, extreme weather events – and preparing for inevitable changes. The IKI provides support for national adaptation approaches in which ecosystem-based measures and climate risk management play a central role. These kinds of approaches require capacities and skills that small and Least Developed Countries (LDCs) in particular do not have. In 2015/2016, the IKI's work revolved around national adaptation planning (NAP), risk management, insurance schemes and Ecosystem-based Adaptation (EbA) to climate change.

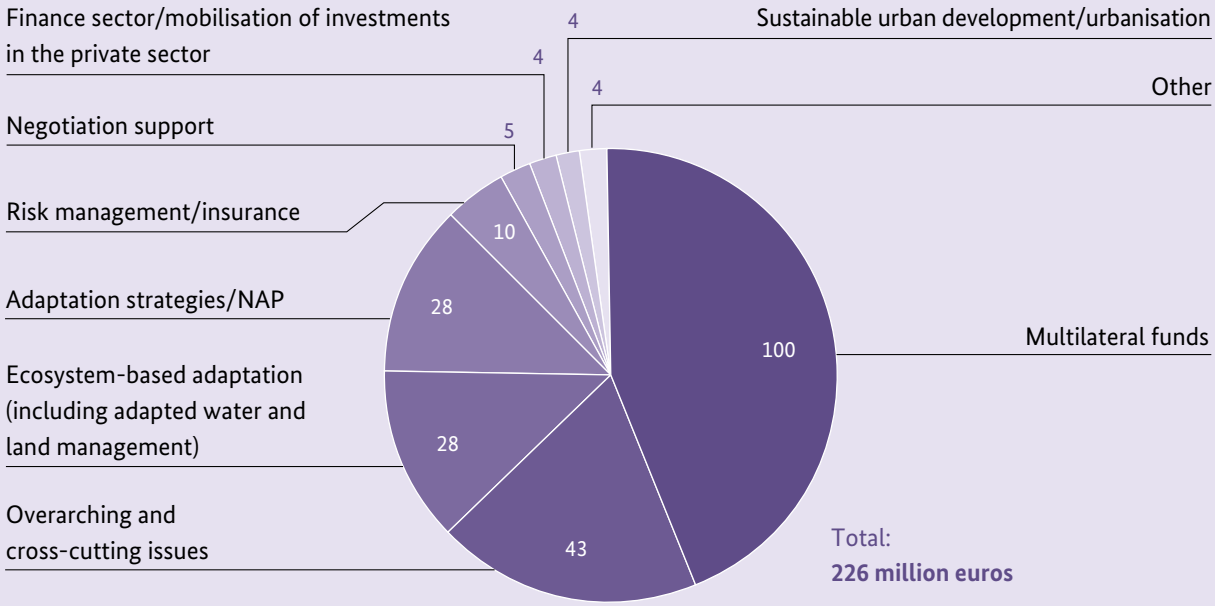
With already around 50 million euros in funding, the IKI helps countries structure adaptation as a central, comprehensive process, which is integrated into the National Adaptation Plan (NAP) process. For example, public investment in Grenada now undergoes a risk assessment process. At the same time, all government departments of this small Caribbean country have to document how they intend to incorporate preventative measures to reflect the climate risks of the future into their planning, for instance in relation to the increasing number of extreme weather events and a rising sea level. The experience gained in this pilot project is available for international learning processes. NAP projects funded by the IKI are also underway in French-speaking African countries and in emerging economies. Climate insurance policies that distribute the

risk within a group complement these kinds of planning approaches, supported by the IKI, for example in Ghana and Vietnam.

When it comes to the issue of adaptation, there are often calls for higher dykes and technical safety devices. In contrast, EbA relies on the targeted use of natural resources and the restoration, strengthening and development of ecosystem services to minimise the effects of climate change on human beings. The principle is to work with nature and not against it to adapt to climate change. By the end of 2016, the IKI had already invested 125 million euros in EbA and is recognised internationally as a pioneer. In Asian and Caribbean countries, coastal communities are planting mangroves and local groups are gaining experience with terracing, reforestation and water retention in high mountain regions. In Thailand, Colombia and Vietnam the IKI supports projects that incorporate ecosystem services into their flood management plans. This includes measures related to inundation areas or the water retention capacity of the soil on the upper reaches of rivers.

Adaptation is not just about preventing disadvantages, it is also about tapping into new opportunities. For example, women in the Panchase region of Nepal have increasingly made use of the economic and environmental benefits of the traditional broom grass. It stabilises the slopes against landslides which can occur with increasing frequency as a result of climate change. At the same time, selling broom grass generates additional income for the women and gives them greater independence.

Area II – Adapting to the impacts of climate change (2015 to 2016, in million euros) according to Doha accounting method



Source: BMUB | Total funding volume according to accounting method by commitment: 211 million euros

The tropical rainforest in the Amazon region in South America is home to a fascinating diversity of species. However, this unique habitat is at great risk due to deforestation.

Conserving natural carbon sinks/ REDD+

Incentives to protect and restore forests

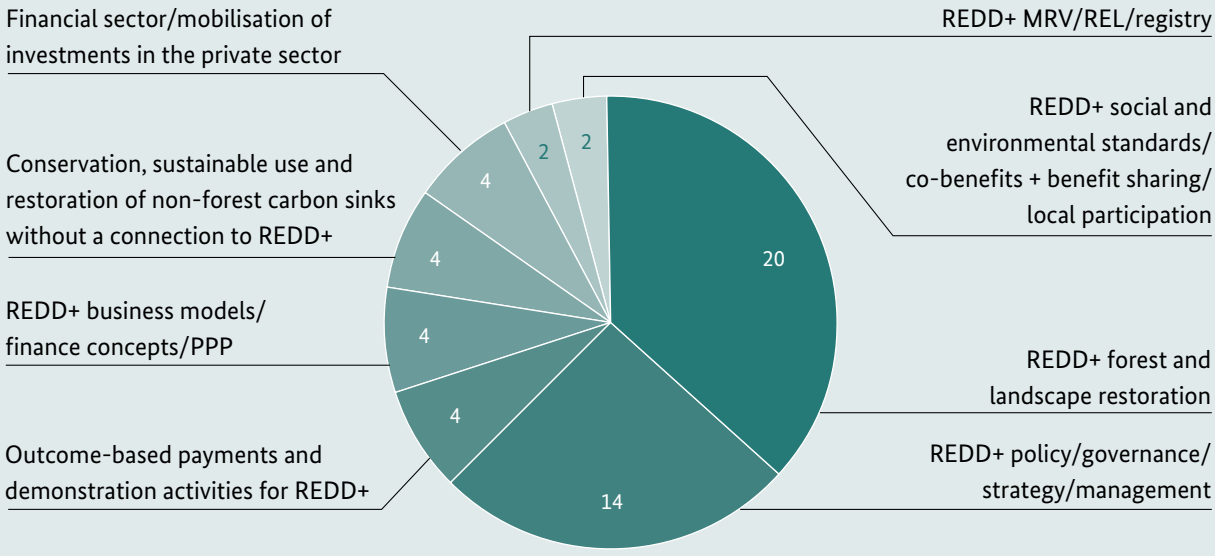
Agriculture and forestry are second only to the energy sector in causing the increase in GHGs in the atmosphere, in particular as a result of deforestation and the destructive use of forests. In its Fifth Assessment Report, the International Panel on Climate Change estimates that around 24 per cent of emissions harmful to the climate originate in the AFOLU sector (Agriculture, Forestry and Other Land Use). Protection measures for the remaining intact forests, sustainable forest management and the restoration of forests can significantly reduce the amount of carbon dioxide (CO_2) discharged into the atmosphere over the long term and extract carbon from the atmosphere and permanently store it in biomass, dead wood and soil. Forests also stabilise the soil, play a major role in the Earth's water balance and are home to a huge variety of animals and plants.

The Paris Climate Agreement as adopted at the end of 2015 formally included the reduction of emissions from deforestation and forest degradation, known as REDD+, as an essential component in endeavours to keep global warming well below 2 degrees Celsius. Around half of the NDCs contain declarations of intent related to forest protection and agriculture. At the same time, this presents a great opportunity in the fight against biodiversity loss. The rules and conditions for developing countries to implement forest emission reductions under the Climate Convention were negotiated over a 10-year period and defined in the Warsaw Framework for REDD+.

One focus in this funding area in 2015/2016 was the restoration of forests on degraded areas by promoting native species, for example in Ethiopia, Kenya and Brazil. At the same time, projects provided support to partner countries by helping them to establish better framework conditions to prevent deforestation along the supply chain of agricultural products, and to develop sustainable business models for forest protection. These aim to prevent deforestation and simultaneously improve the living situation of people in the region. In Peru, an IKI funded initiative supports local farmers to pursue agro-forestry methods that increase their income, creates new jobs and at the same time reduce the pressure on forests. The aim is to involve the different interest groups from the very outset in planning and management decisions. Moreover, regional administrations in Peru and Brazil are advised on how to structure sustainable economic models that do not involve deforestation. The affected forest inhabitants are involved in the development of land-use plans from the very beginning. This also gives them access to the benefits stemming from lower emissions.

Germany was one of the first countries to provide results-based REDD+ funding. As early as 2013, BMUB made 9 million euros available via the REDD+ Early Movers programme of the Kreditanstalt für Wiederaufbau (KfW). The western Brazilian state of Acre verifiably lowered CO_2 emissions by 8.3 million tonnes. It used the money over three years until the end of 2016 in order to reduce the drivers of deforestation and help families establish alternative, environmental friendly sources of income.

Area III – Conserving natural carbon sinks/REDD+ (2015 to 2016, in million euros) according to Doha accounting method. Total: 54 million euros



Source: BMUB | Total funding volume according to accounting method by commitment: 53 million euros

As plant pollinators, hummingbirds fulfil a key role in preserving tropical forests. The protection and sustainable use of forest ecosystems in Latin America can help save endangered hummingbirds from extinction and preserve important ecosystem services.

Conserving biological diversity

Recognising the existential imperative of taking action

With the Strategic Plan 2011 to 2020 adopted in 2010 and its 20 Aichi Targets, the Parties to the Convention on Biological Diversity (CBD) agreed to a comprehensive and ambitious timetable. This aims to slow the ongoing loss of genetic diversity and the diversity of species and habitats and completely halt this loss over the long term. To achieve this goal, the strategy is to reduce pressure on biodiversity, to restore ecosystems, use biological resources sustainably, and to share the benefits arising from the utilisation of genetic resources fairly and equitably.

The IKI orients its funding around selected Aichi Targets in the area of biodiversity. The projects are intended to help implement the existing national strategies and action plans for biodiversity conservation in the partner countries and involve strategic partners from agriculture and forestry, the financial sector and other relevant sectors as early as the planning phase.

The first Aichi Target is geared towards raising awareness of the value of biological diversity and the steps to conserve and use it sustainably. In this area, for example, the IKI is providing support to set up a trilingual multimedia platform with photo galleries, reports and background articles on biodiversity issues that schools and other educational institutions can access and use.

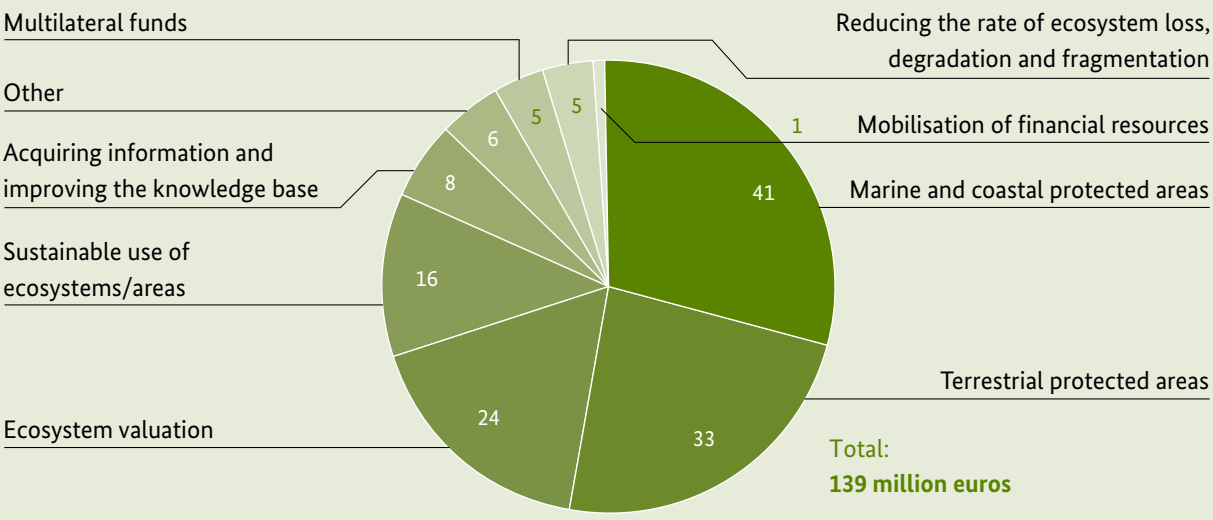
Several IKI projects also aim to quantify the value of biodiversity using the TEEB approach (The Economics of Ecosystems and Biodiversity). This enables decision-makers to institutionalise economic instruments to

compensate ecosystem services for conserving biodiversity and to identify and gradually eliminate incentives harmful to biodiversity.

Support for protected areas and their effective and equitable management, as described in Aichi Target 11, is a central goal in the IKI's biodiversity funding area. This and other goals are being pursued by projects, for example, in the Kafa Biosphere Reserve in Ethiopia, Manu in Peru or in the wetlands of the Mono deltas in the border area of Benin and Togo. In these regions, activities are being carried out for different sections of the population to help achieve a better understanding of biodiversity and the ecosystem services linked to them, to protect natural resources and use them sustainably and at the same time to promote regional development. In this context, the following key principle applies to activities: whenever project activities include creating protected areas or restoring ecosystems, local and indigenous communities must be involved in the process from the start.

IKI marine and coastal protection projects have already gained in importance since 2011. Oceans and seas are the least protected areas although they cover 71 per cent of the Earth's surface. The IKI supports several partner countries in marine spatial planning and in devising management plans for coastal and marine ecosystems. The aim here is to make the use of marine resources more sustainable, to protect biologically and environmentally important areas, and to restore degraded ecosystems that provide essential services.

Area IV – Conserving biological diversity (2015 to 2016, in million euros) according to Doha accounting method



Source: BMUB | Total funding volume according to accounting method by commitment: 69 million euros

IKI milestones

March 2015

Identifying cross-sectoral solutions for the sustainable use of marine resources
The IKI Blue Solutions project establishes networks committed to the protection, sustainable use and restoration of marine and coastal ecosystems. Its activities include organising workshops and setting up an online platform with partners. For example, it launched the Sustainable Oceans Lab in conjunction with the Global Leadership Academy in Berlin at the beginning of March. The Sustainable Oceans Lab is a range of services for international capacity development implemented by the Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and financed by BMZ. It involves leaders from six global marine protection initiatives, international experts and representatives of the private sector sharing ideas about solutions for sustainable marine protection over an entire year. One of the results is that Blue Solutions is receiving requests for training courses from various other projects.

April 2015

Global workshop on INDCs
The 19th meeting of the UNFCCC, held in Warsaw in 2013, adopted a decision to introduce INDCs. A workshop on INDCs was subsequently held in Berlin. The countries participating in the workshop exchanged ideas about how to prepare and structure INDCs and discussed the related technical and political processes. The IKI supports around 25 partner countries in drawing up INDCs that the signatories had to submit to the UNFCCC Secretariat no later than autumn 2015.

September 2015

Emissions trading system for China
The Chinese president announced the roll-out of the National Emissions Trading System (ETS). The IKI has been supporting China in setting up the ETS since 2012. The project, with a volume of 5.5 million euros, strengthens the knowledge base needed by politicians, carbon exchange staff and companies subject to emissions trading. It also offers legal consultancy services. In 2017, an ETS will be put in place which will integrate approximately 10,000 companies from a range of sectors including energy, petroleum refinement, chemicals, glass and ceramics, steel, non-ferrous metals, paper, and national aviation.

October 2015

Climate change on the curriculum
Children are the generation of the future and as such are an important target group when it comes to tackling the challenges of climate change. In October the IKI, in conjunction with its project partner Plan International, launched its first project to specifically address children and link children's rights with education about climate issues. The project works to incorporate climate change into the curricula of schools in South-East Asia, with a focus on its causes, impacts and possibilities for adaptation. It therefore helps children and young people to adapt to the impacts of climate change in different areas of their lives.

November 2015

Online platform for environmental protection projects
Deutsche Welle's Global Ideas multimedia platform, which BMUB funds through the IKI, received the 2015 environmental media prize awarded by Deutsche Umwelthilfe in the online category. Global Ideas showcases successful biodiversity conservation and climate action projects, thus motivating people around the world to protect the environment. Every week the platform presents new short films about exemplary project ideas and profiles people in developing and emerging countries who are committed to conserving biodiversity and mitigating climate change.

December 2015

IKI supports the IPBES Global Biodiversity Council
Developing countries in particular expressed a desire to build and strengthen scientific capacity at national and regional level in the context of IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services). Based on the results of studies, the BES-Net network, which is coordinated by the United Nations Development Programme (UNDP), and what are known as 'trilogues' bring together scientists, politicians and practitioners. The regional trilogue for Eastern Europe is currently being prepared on the subject of pollinators based on a completed study. It will be organised by Georgia in 2017. The BES-Net network now comprises 75 partner organisations as well as 86 international experts who answer questions on different topics on an online platform. BMUB makes 4.5 million euros available from IKI funding to support BES-Net and the trilogues.

November 2015

India: establishment of a national body to advise on resource policy
The Indian Resource Panel, which emerged from an IKI project, works on recommendations for the Indian Government to improve resource efficiency and secondary raw material management in the private sector. This will be used to formulate a national strategy for resource efficiency. It is the world's first national advisory body on resource policy.

December 2015

New fund to combat climate change
BMUB provides nearly 7 million euros from IKI funds for the newly formed MRV Trust Fund, making it the largest donor. The fund mainly supports developing countries and emerging economies in measuring their GHG emissions and in assessing the impact of climate change on individual regions, which is an important basis for the 2-degree international climate target. Emphasis is also put on further on site-training for decision-makers and scientists.

February 2016

World's largest solar power plant in operation
On 4 February 2016, the Moroccan King Mohammed VI opened the Noor I (Arabic for light) power plant at the world's largest solar thermal energy farm near the Moroccan city of Ouarzazate. BMUB contributed 15 million euros in IKI funding to this project.
The power plant is set to generate 370 gigawatts of electricity and save 230,000 tonnes of CO_2 each year. The construction of the Ouarzazate solar complex is part of the Moroccan government's Solar Plan adopted in 2009, which aims to meet 42 per cent of the nation's electricity demand with renewable energy by 2020.

July/August 2016

NAP process kicks off in Mali
The kick-off event for the NAP process was held on 8 August in Mali. Two IKI projects supported the NAP process: the Innovative Development Planning for Climate Change Adaptation project and the Mali-Pilot Programme for an Integrative Adaptation Strategy. Under the scope of both projects, a comprehensive analysis to investigate the vulnerability of the population to the effects of climate change began in July. The goal is to reduce vulnerability and incorporate aspects of climate change into development strategies and plans at all relevant levels and sectors.

September 2016

More and more countries are participating in restoring forests
The Bonn Challenge, the most important international platform for the restoration of forests, brings together an ever growing group of dedicated countries.
In September, Malawi and the Association of Guatemalan Private Natural Reserves announced their commitments to restore four million hectares of forest; in December 2016 in Cancún, Brazil commited to restoring 12 million hectares of forest as part of the Bonn challenge. The IKI initiated nine new projects in support of the Bonn Challenge in 2015 to 2016.

October 2016

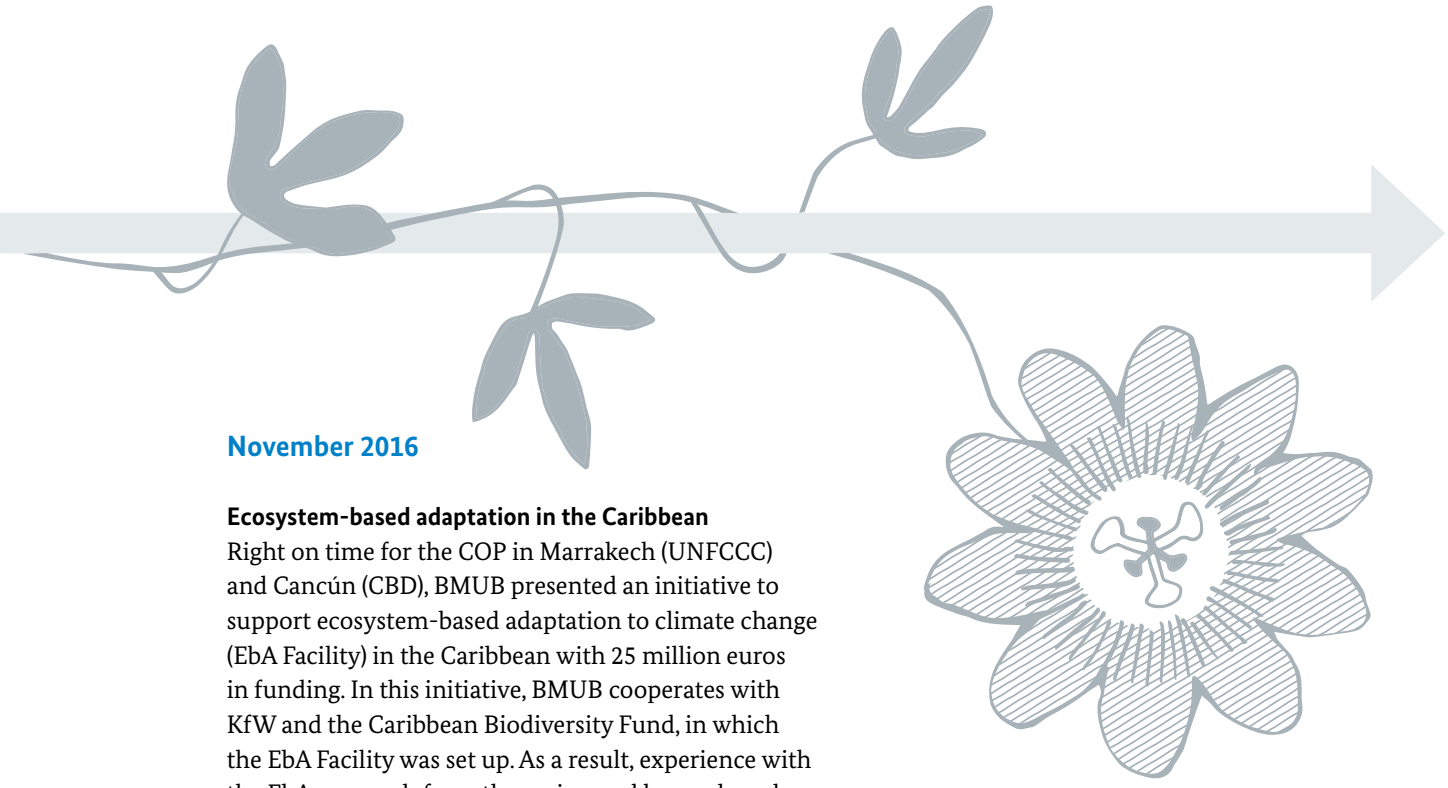
Start of three IKI initiatives for NDCs and transparency
In October, the Support Project for the Implementation of the Paris Agreement (SPA) took up its work in Berlin. BMUB supports the SPA with three initiatives that implement NDCs and the transparency requirements of the Paris Climate Agreement. At global, regional and national level, the cross-cutting issues of capacity building and knowledge management play an important role in developing and implementing NDCs, low-carbon development strategies (LEDS), Nationally Appropriate Mitigation Measures (NAMA), climate financing mechanisms and MRV systems.

November 2016

Stopping global nitrous oxide emissions
At the end of 2016, BMUB commissioned a technical consulting unit (GIZ) to support the Nitric Acid Climate Action Group in preventing extremely harmful nitrous oxide emissions. Nitrous oxide (N_2O) mainly occurs during the production of nitric acid, a basic component of many fertilisers. Although cost-effective ways to prevent N_2O are available on the market using inexpensive catalytic abatement systems, the carbon market currently no longer offers any incentives to invest in mitigation measures. The initiative seeks to support prevention of these emissions in the industrial sector of developing countries and emerging economies by 2020. To this end, the partner countries will assume responsibility for further reducing emissions after 2020 within the framework of their NDCs.

December 2016

Presentation of IKI Climate Protection and Electric Mobility project in Beijing
The results of the Climate Protection and Electric Mobility project were presented as part of an official closing event in Beijing. The project, which was launched in 2009, aimed to evaluate the contribution electric mobility makes to climate change mitigation in China and provide support with systematic approaches. Scientific analyses were used to quantify the climate and environmental protection potential of electric mobility in China. Strategies and measures for their implementation were then identified and successfully implemented within the framework of pilot projects. German and Chinese car manufacturers joined forces in the project and collaborated on issues such as charging infrastructure.



November 2016

Ecosystem-based adaptation in the Caribbean
Right on time for the COP in Marrakech (UNFCCC) and Cancún (CBD), BMUB presented an initiative to support ecosystem-based adaptation to climate change (EbA Facility) in the Caribbean with 25 million euros in funding. In this initiative, BMUB cooperates with KfW and the Caribbean Biodiversity Fund, in which the EbA Facility was set up. As a result, experience with the EbA approach from the region and beyond can be significantly mainstreamed and the vulnerable and unique coastal and marine ecosystems better protected.

At the 2016 global climate conference in Marrakesh, stakeholders founded a global NDC partnership aimed at supporting countries in ambitious and rapid implementation of the Paris Climate Agreement.

National announcements of climate action plans become mandatory: from INDCs to NDCs

With the Paris Climate Agreement in December 2015, all 197 signatory countries, including industrialised, emerging and developing countries, committed to taking action. This sets a new standard of quality in international cooperation.

The signatories undertake, among other things, to continue to pursue ambitious measures to limit global warming to well below 2 degrees Celsius and even undertake efforts to keep the increase to below 1.5 degrees above pre-industrial levels. This is the first time that the 2 degree-limit has been confirmed in an international treaty.

The anticipated impact of the Paris Climate Agreement is based largely on the INDCs that were submitted by almost all countries to the UNFCCC Secretariat. In addition to reduction targets for emissions harmful to the climate, many INDCs also formulate measures needed to restore ecosystems and to adapt to climate change – an issue that has high priority in many countries due to climate change effects that are already evident locally.

Germany assumed a leading role in this process. In addition to the ongoing policy consultancy projects in key emerging economies and developing countries, BMUB made 5 million euros available to partner countries to support INDC development. Since spring 2014, the IKI has supported approximately 30 states to draft their INDCs. While some

partner countries asked for technical advice, for example, in calculating emissions for their INDCs, others wanted support for the entire process of drawing up the INDCs.

The IKI supported many different technical measures in this context. It helped conduct studies on current emissions, develop scenarios, perform country-specific needs analyses, create cost estimates and formulate concrete reduction targets in different sectors. Its projects created guidance documents, organised webinars and advised inter-ministerial working groups on identifying and including key stakeholders. In addition, the IKI encouraged informal dialogue such as communication within and between departments and governments to encourage mutual sharing of experience and learning. Different partners were involved from the groups of LDCs and Small Island Developing States (SIDS) as well as from other developing countries and emerging economies.

With the entry into force of the Climate Agreement in November 2016 – four years earlier than anticipated in Paris – the signatory countries are called on to implement their contributions: the INDCs become NDCs. The Federal Environment Ministry is committed to ensuring that the political momentum is maintained at both international and national level of the partner countries and is therefore promoting implementation of the NDCs. Germany offers comprehensive advice to ambitious countries. The countries will now have to further develop an enabling policy environment and existing institutions to strategically plan and implement the climate measures. In order to ensure that the long-term target is met (limit global warming to well below 2 degrees Celsius and even pursue efforts to stay below 1.5 degrees), a global review process ('ambition mechanism'), which includes the NDCs, will take place every five years starting in 2018. The NDCs will be updated every five years starting in 2025. This mechanism is designed to continuously increase the efforts and the success in international climate action.

Spreading good ideas, understanding complex relationships

The key factor driving the success of the IKI's work is the professional exchange between decision-makers and people who are involved in implementation: communicating about and discussing good ideas, strategies and projects encourages the dissemination of successful approaches. In addition, international networking leads to a deeper understanding of complex relationships.

In the run-up to the Paris Climate Conference, the IKI supported several forums for international exchange. For instance, six regional workshops were held in which representatives from all over the world took part to jointly advance the elaboration of the INDCs. The regional dialogues were organised by UNDP and the UNFCCC Secretariat. Participants strived for reaching a common understanding on the question of which elements INDCs should contain and what information is needed to develop them. They also shared their experience with low-emission strategies (LCDS), NAMAs and in the area of MRV. In the course of the dialogues it became clear that the capabilities and needs of the countries are extremely

different. In addition to direct meetings, internet-based workshops were held. Furthermore, guidance documents were developed for the international community.

The International Partnership for Mitigation and MRV, launched by Germany, South Africa and South Korea in 2010 and co-financed by Germany, was instrumental in building a bridge between the UNFCCC climate negotiations and practical questions of technical implementation. Partnership meetings of and with negotiators organised complementary to the official climate negotiations are particularly useful in this context because they allow for an informal exchange on technical and political issues and joint discussion of current issues.

It is also particularly important for practitioners to learn with and from one another. Therefore, in order to work together and pursue cooperative efforts to mitigate GHGs in different regions and sectors and support adaptation, the IKI NDC Support Cluster (in short: NDC cluster) was set up in the spring of 2016. The cluster aims at close cooperation and regular exchange of information between project partners and organisations with special expertise required for NDC implementation. Organisations that are part of the NDC cluster collaborate to jointly identify priority sectors in close cooperation with the partner countries and to adapt the support measures to the partner countries' respective requirements. Another objective of the NDC cluster is to introduce systems to track the attainment of targets set within the NDCs and to identify possibilities for funding of NDCs. Learning from each other and sharing experience speeds up the process: 'front-runners' can give newcomers important information in certain work areas. This can accelerate the pace of effective global developments. The NDC Support Cluster will be gradually expanded both thematically and geographically.

At international level, the NDC partnership was launched (www.ndcpartnership.org) by Germany and **Morocco**. It aims to help developing countries define and implement their climate action plans. Endeavours in climate and sustainable development policy are to be pooled, synergies identified and effective support better coordinated. The partnership is made up of developing, emerging and industrialised countries, institutional partners and non-governmental organisations (NGOs). Membership is open to all countries. To support development of the partnership, BMZ and BMUB are financing the establishment of a secretariat in Washington and Bonn. Both ministries will align their climate projects more closely with implementation of the NDCs.

The specific tasks of the NDC partnership include organising fast access to tailored advice for developing countries. To this end, the partnership will build on the knowledge and work of many organisations, initiatives and platforms. The secretariat will also have a centre that developing countries can contact for climate-related questions and support needs, for example on topics related to expanding renewable energies, sustainable urban development or climate-resilient agriculture.

PROJECT EXAMPLE

Project Title: Support Project for the Implementation of the Paris Agreement

Countries: Morocco, Peru

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 6.7 million euros

Duration: 2016 to 2019

Continuity as a success factor – the example of the Philippines

The IKI's work builds on continuity and long-term partnerships. This is evidenced by the example of the **Philippines**: this island state is one of the countries most affected by climate change due to extreme weather events. At the same time, fossil fuels account for 72 per cent of the electricity mix – and this percentage is threatening to increase further because the population, the economy and therefore the demand for energy are growing considerably, and wind power, solar energy and energy from biomass hardly contribute anything despite their huge potential.

On behalf of the IKI, GIZ has been supporting key actors in the Philippines since 2012 in the implementation of the climate legislation adopted three years previously that aims to reduce emissions harmful to the climate and promote adaptation to climate change. The goal was to strengthen the national climate commission, to create a national climate strategy and a plan of action, to build institutional capacity, and to coordinate the measures and integrate them into many planning processes. An innovative monitoring system for adaptation impacts has been established. Cities, counties and municipalities were given instruments to enable them to plan climate-resilient and environmentally compatible land use and development. In addition, concepts were drawn up to reduce emissions in the electricity sector, such as feed-in tariffs, and for the development of a renewable energy market.

The Philippines received methodological support in their independent formulation of the INDCs and presented them at the UNFCCC in autumn 2015. The INDCs stipulate that greenhouse gas emissions – provided there is international support – are to be 70 per cent lower than in the business-as-usual scenario by 2030. The IKI project also supported the Philippines in distributing information about its climate policy and incorporating it into the negotiation process at the meeting of the Conference of the Parties in Paris.

PROJECT EXAMPLE

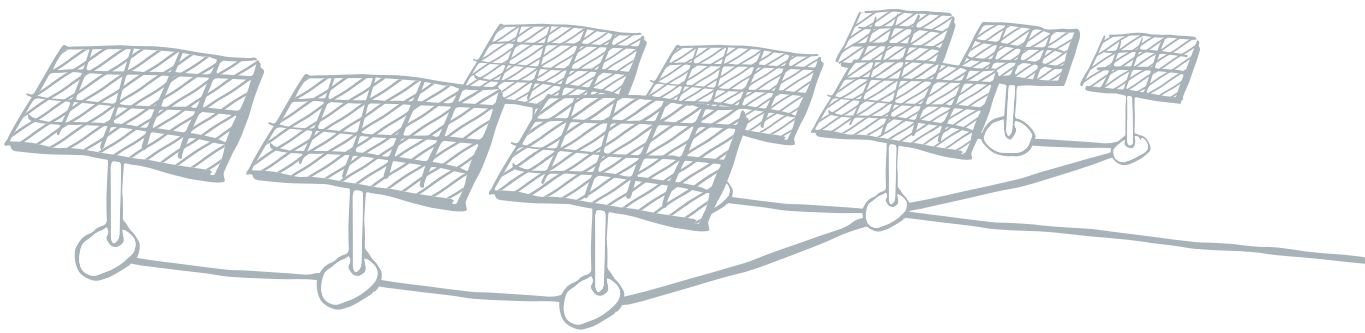
Project Title: Support of the Philippines for developing and implementing national contributions to the international climate change regime

Country: Philippines

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 5.44 million euros

Duration: 2015 to 2019



The IKI follow-up project launched at the end of August 2016 in the Philippines aims to promote the development of a roadmap to implement the NDCs. Mitigation, adaptation, resilience, as well as biodiversity must be included in the plans at all levels and across all sectors, and success measured and documented. In May 2016 the country already launched a realignment process for its energy policy. The IKI project supports the Philippine partners in implementing the recommendations resulting from the new policy framework. In the process, studies and consultancy services tailored to the Philippine's needs contribute to strengthening the technical capacity of the Climate Change Commission in the field of energy. The issues to be tackled will be defined in conjunction with the Climate Change Commission and the Department of Energy once the energy policy has been completely realigned.

Hand in hand: linking climate action and biodiversity conservation with the Sustainable Development Goals

It will not be possible to achieve comprehensive climate change mitigation and biodiversity conservation unless we also improve the livelihoods of people worldwide, make production and consumption patterns sustainable, and practise peaceful and inclusive forms of government.

For that reason, mitigation, adaptation, forest protection and biodiversity conservation are closely interlinked with the Sustainable Development Goals (SDGs) that were agreed by the international community in New York in September 2015 as part of the 2030 Agenda. The 2030 Agenda, the Paris Agreement, which was adopted shortly afterwards, and the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011 to 2020 create an overarching political framework for the urgently needed social and economic transformation towards more sustainable development that is biodiversity-friendly and does not harm the climate. All three agreements are geared to fundamental changes in a wide range of policy areas and they are global in scope. The SDGs, the NDCs under the Paris Agreement and the Strategic Plan for Biodiversity 2011 to 2020 are often implemented hand in hand, including in IKI projects. For example, in cases where an NDC involves promoting renewable energy and installing smart electricity grids, it is also possible to bring energy security to parts of the population living in remote areas (SDG 7) and create green jobs (SDG 8). In cases where, for example, the protection and restoration of valuable forest ecosystems is successfully supported, food and medicines to ensure food security and combat disease can be made available to present and future generations (SDG 2 and 3).

To ensure good use is made of the impetus for sustainable development, climate action and biodiversity conservation, it is essential that strategies and plans in these fields are coordinated and dovetail with one another. Mainstreaming climate action and biodiversity considerations in other policy areas and including sustainability considerations in climate and biodiversity conservation policies is inherent in the 2030 Agenda, the Paris Agreement and the Strategic Plan for Biodiversity 2011 to 2020. There are a number of key challenges for their practical implementation: in particular, the relevant levels of government must be in a position to identify potential for sustainable development, climate action and biodiversity and to incorporate them into their decision-making processes.

The provision of start-up finance is particularly important for climate change mitigation projects in order to reduce risks and generate incentives for investors.

Making mitigation and adaptation possible: climate finance

In the Paris Agreement the international community formulated the goal of making finance flows consistent with GHG mitigation and climate-resilient development. To that end, the industrialised countries renewed their commitment to mobilise 100 billion US dollars a year for climate action in developing countries, starting in 2020. This commitment will be extended to 2025. The plan is that even more ambitious goals will be set from that point onwards, but they have not yet been agreed.

Public climate finance is particularly significant in this field and continues to play a leading role in industrialised countries. But emerging economies and developing countries are also being encouraged to use public monies to take action on a voluntary basis and mobilise private investment. To do so, they need a reliable legal framework and also, in some cases, additional economic incentives.

The IKI is working towards not only triggering new investment in climate-friendly technologies but also ensuring that climate considerations are taken into account in all investment decisions. This is particularly important in the case of investment in infrastructure, which lasts for decades. The IKI supports, for example, innovative funding mechanisms that are likely to mobilise private investment in climate action that has a potential transformative impact. It supports climate-friendly and sustainable business models. IKI's primary concern in the area of emissions reductions is to support investment in renewable energy and energy efficiency.

IKI concentrates here on providing start-up finance for climate protection projects with the aim of reducing the risks associated with their economic and technical feasibility in the development phase. This is intended to create incentives for investors and address the problem that there is a serious shortage of projects worldwide that are mature enough to attract funding and offer investment opportunities for private investors. The IKI also supports emerging economies and developing countries in their endeavours to develop their public institutions, enabling them to meet the funding allocation criteria for the Green Climate Fund (GCF) and deploy this funding successfully. A major concern is that they must comply at institutional level with the GCF's high fiduciary standards and that they develop eligible projects for which applications for GCF funding can be submitted.

Germany, in conjunction with the United Kingdom, Denmark and the EU Commission, funds the implementation of ambitious mitigation projects in developing countries and emerging economies through what is known as the NAMA Facility. The Fourth Call for NAMA Support Project Outlines was launched in summer 2016. Up to 60 million euros have been made available for this bidding round.

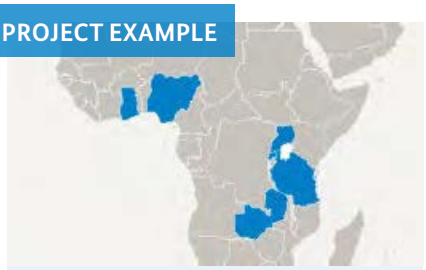
Reliable financing leads to sustainable success

There is a recurring difficulty with regard to international climate finance that stems from the use of different currencies and their changing relative value over time: income from investments is generated in local currency, whereas external funding is denominated in US dollars or euros. It takes a long time to pay off all the loans. Any significant fluctuations in the exchange rate that may occur during that time can have huge consequences for the costs of capital associated with a project. For that reason, many projects never manage to progress beyond the development phase. Hedging this risk in many emerging economies and developing countries is often not possible, far too expensive or inadequately geared to including investments in renewable energy and energy efficiency, for example.

A project launched in Africa at the end of 2015 tackles this very problem: with the help of IKI funding, KfW is investing 30 million euros in a trust fund called the Currency Exchange Fund. The Amsterdam-based fund has many years of experience in this field and is globally diversified. The aim is to give lenders and investment partners in countries such as **Rwanda, Uganda, Kenya, Tanzania, Zambia** or **Ghana** more security when financing renewable energy and energy efficiency projects. One of the projects supported in this way is a G7 initiative to install about 10 gigawatts of renewable energy by 2020 in conjunction with the African Union. The initiators of the project are expecting GHG reductions of up to 500,000 tonnes of CO_2 equivalent a year.

An IKI project in Latin America, which was launched in early 2016, has chosen a different approach that holds great climate investment potential: it is supporting the Inter-American Development Bank (IDB) with a **Green Finance Facility** to establish country-specific programmes

PROJECT EXAMPLE



Project Title: FX – Facility for Renewable Energy and Energy Efficiency in Africa

Countries: Kenya, Nigeria, Rwanda, Tanzania, Uganda, Zambia

Implementing Organisation: KfW Development Bank

BMUB grant: 30 million euros

Duration: 2015 to 2025

to develop new green financing options. Funding is channelled through the national development banks, which are ideally suited to manage private investment in energy efficiency and renewable energy due to their strategic position and local knowledge. The support takes very different forms, ranging from long-term funding from IDB at favourable terms or training for bank employees through to joint development of business plans. The IKI funding totals 5 million euros, and the overall plan is to mobilise significant additional funds from national development banks and private investors in the project countries – **Brazil, Colombia, Mexico, Paraguay** and **Uruguay**. The finance ministries of the five countries and local implementing partners and government agencies are closely involved in order to ensure optimum coordination with the programmes of individual countries.

IKI projects have also already achieved great success in collaboration with the private sector. IKI has commissioned the Deutsche Investitions- und Entwicklungsgesellschaft, for example, to support private investment that facilitates a transfer of technology and know-how in the fields of energy efficiency and renewable energy. If the technologies supported by these private funds are able to fully establish themselves in the market, it could soon be possible to achieve CO_2 reductions of up to 15 million tonnes a year.

An IKI project carried out by GIZ specialised in microcredit financing in Mexico for endeavours to introduce energy-efficient cooling systems. Primarily small and medium-sized enterprises were supported in replacing their climate-damaging cooling infrastructure with more efficient products. And it proved very successful: CO_2 emissions were cut by 27,000 tonnes a year. Over 11,300 businesses received support during the project's term from June 2012 to August 2015. The credit volume totalled around 24 million euros.

PROJECT EXAMPLE

Project Title: Green Finance Facility

Countries: Brazil, Colombia, Mexico, Paraguay, Uruguay

Implementing Organisation: Inter-American Development Bank (IDB)

BMUB grant: 5 million euros

Duration: 2016 to 2021

Establishing anti-corruption standards, creating transparency

IKI's activities are having a noticeable effect – this was demonstrated in an exemplary fashion in a project concluded in 2015, which focused on **combating corruption connected with climate action**. The IKI supported the global Transparency International alliance in determining the extent to which climate finance flows are transparent. Anti-corruption experts developed practical proposals for reforming relevant regulations, which influenced changes made to the anti-corruption standards in a number of guidelines, such as those of the Adaptation Fund and others connected with REDD+, or the Forest Carbon Partnership Facility. Transparency International also carried out a feasibility study on an independent mechanism to enable civil society to submit complaints to the GCF. This was an important basis for the discussion that was part of the process to refine the details of the GCF's setup.

Between 2011 and 2014, Transparency International, working through the IKI, funded anti-corruption and transparency measures in national climate finance and mechanisms in Bangladesh, Dominican Republic, Kenya, Maldives, Mexico and Peru. It contributed, for example, to the

PROJECT EXAMPLE

Project Title: Strengthening Transparency, Accountability, and Integrity in Climate Finance Governance

Countries: Kenya, Maldives, Mexico, Peru

Implementing Organisation: Transparency International

BMUB grant: 0.3 million euros

Duration: 2014 to 2015

development of strategic guidelines for ministries and strengthening of civil society networks.

In addition to undertaking to mobilise private and public investment in climate action, which if possible has a transformative effect, donors must also ensure that funds are used in a way that is sustainable, transparent and effective.

As an innovative climate finance instrument, the IKI therefore targets its funding towards projects that aim to increase transparency and effectiveness and achieve compliance with environmental and social standards for climate finance. This is made possible by strengthening civil society organisations, for example by enabling them to exercise a watchdog function. They include projects to establish an NGO network to follow the development of the Adaptation Fund (organised by Germanwatch) or to support Transparency International in conducting studies on the transparency of climate finance funds and their susceptibility to corruption.

Analysing climate risks as a basis for public investment

PROJECT EXAMPLE

Project Title: Adapting Public Investment to Climate Change

Country: Peru

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 3.23 million euros

Duration: 2011 to 2015

Creating a basis for public investment that is sustainable and adapted to climate change – this is the approach being pursued by another successful IKI project in South America. The pressure to take action with regard to **adaptation and public investment in Peru** is huge; the Andean Community is predicting extreme risks from heavy rains, droughts, rising temperatures and storms. The measure therefore included projects in two regions of Peru, which are intended to demonstrate best practices. A project in Cusco in the Andean highlands focused on tourism and irrigation as sectors that are particularly important for the economy. The local authority of Piura on Peru's north coast worked on investment projects related to irrigation.

As a result of the project managed by GIZ, it is now a statutory requirement in Peru that all public investment projects consider climate risks, which is a first in Latin America. The Ministry of Economy and Finance in Lima has drawn up guidelines on taking climate change into consideration when developing and evaluating public investment in tourism. In this way, very different projects on adaptation to climate change are emerging – ranging from work to stabilise slopes to delivering training measures on how to use particularly cold-resistant crop varieties. This is pioneering work, which is transferable to projects throughout the entire country.

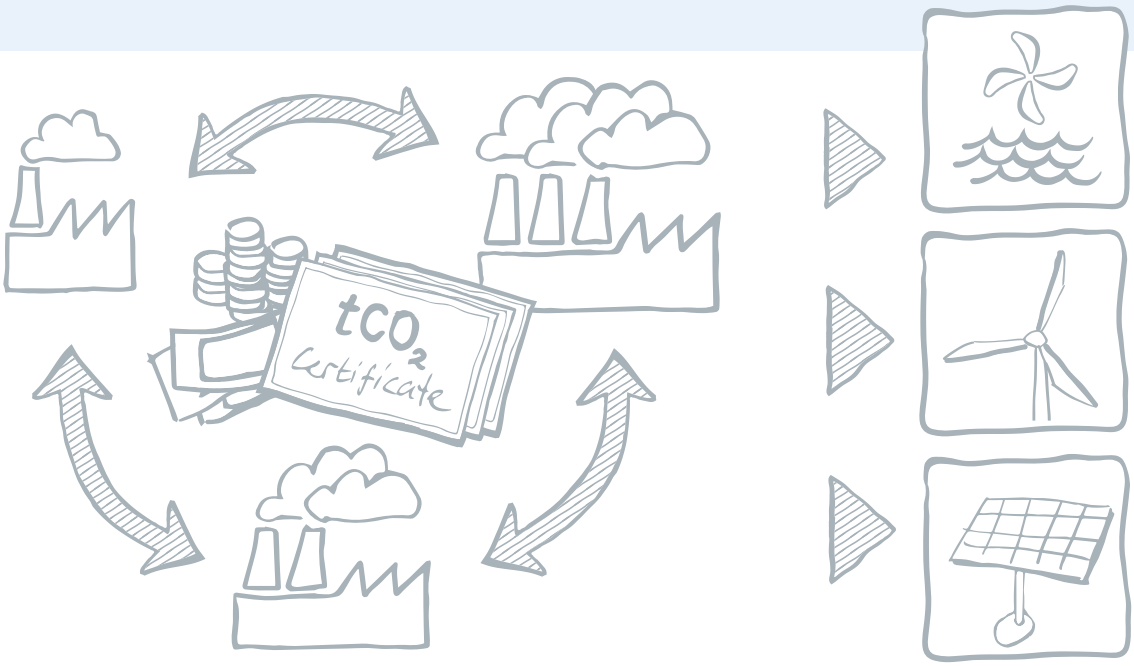
The measures will therefore be rolled out in other regions of Peru in a follow-on project. But the Colombian and Brazilian governments will also participate in the project and, with support from IKI, work for greater inclusion of adaptation to climate change when planning public projects.

Moving towards a global carbon market

In a global carbon market, CO_2 emissions would have a monetary value. That would create an incentive to reduce CO_2 emissions in general, but in particular wherever that can be done at the lowest cost. CO_2 pricing is therefore considered to be a key instrument for achieving GHG reduction targets as efficiently as possible. Since the 1997 Kyoto Protocol, a number of different options for doing this have been available: the trading of emission allowances in emissions trading systems (ETS) and project-based mechanisms such as the Clean Development Mechanism (CDM) and Joint Implementation (JI), all of which are based on tradeable certificates. Such mechanisms encourage businesses to invest in low-carbon technologies.
The Paris Climate Agreement also contains guidelines on how a global carbon market could develop. Article 6 provides for all Parties to set up a transparent accounting system for GHG emissions. It introduces new mechanisms for voluntary cooperation, which could help in implementing the NDCs.

BMUB supports the development of a global carbon market through various forums. One of them is the Carbon Market Platform, which Germany set up under its G7 presidency in 2015. The platform's aim is to develop robust rules and standards for the use of global carbon markets via a multilateral dialogue. BMUB also initiated the International Carbon Action Partnership, which organises transfer of knowledge between countries that have already introduced an ETS or plan to do so. Through the IKI, BMUB funds a total of 21 carbon market projects, including the Partnership for Market Readiness, a globally oriented platform, where timetables for the CO_2 pricing in numerous countries have been developed.

Another IKI project supports the establishment of a national ETS in China, where the world's largest carbon market could potentially develop. The aim is for emissions to reach their peak level by 2030 at the latest and the carbon intensity of the gross domestic product to be reduced by 60 to 65 per cent compared with 2005. Emissions trading would make a major contribution to this. To this end, regional emissions trading systems have already been piloted in seven cities and provinces. The IKI project focused mainly on facilitating communication among experts. Organisations involved included the German Emissions Trading Authority at the Federal Environment Agency and representatives of German industry, who have been participating in the European emissions trading scheme since 2005. In early 2016, local ETS emissions in China together covered about 1.2 billion tonnes of CO_2 equivalent, which puts them almost on a level with the EU's emissions trading system, which is currently the largest, accounting for 1.8 billion tonnes.



By 2030, the loss of global forests is to be halted. To achieve this, considerable investments will be made in forest protection and reforestation.

REDD+, GNU and Forest Landscape Restoration

Protecting forests is one of the most effective tools in the fight against climate change and loss of biodiversity – which is why it is a key component of the IKI's activities.

Tropical rainforests, in particular, are able to store vast quantities of carbon in their biomass. An important tool in preserving this natural resource is what is known as the Bonn Challenge. It was set up at a conference of ministers of the same name, which BMUB organised in conjunction with the International Union for Conservation of Nature and Natural Resources (IUCN) in Bonn in 2011. It calls for 150 million hectares of forest to be restored by 2020 – or at least for the necessary processes to be initiated. In March 2015, BMUB as initiator and important financier, and working in conjunction with IUCN, the World Resources Institute (WRI) and the Norwegian Government, organised a follow-on conference entitled Bonn Challenge 2.0 to drive forward implementation in the countries concerned and encourage new commitments. This spawned regional conferences in Latin America (2015 and 2016), Africa (2016) and South-East Asia (2017).

BMUB, working through the IKI, supports on-the-ground implementation in the form of local initiatives and pilot schemes. It helps to strengthen capacities in the partner countries and to develop analytical resources and maps showing the potential for restoring forests. Lessons learned and progress made are shared on a platform at www.bonnchallenge.org. When the thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity

(COP 13) convened in Cancún at the end of 2016, pledges for 137 million hectares had already been secured. Now 37 countries, organisations and businesses are working towards achieving the Bonn Challenge's target. BMUB has thus far funded over 25 forest restoration projects and made 100 million euros in IKI funding available. This figure is set to be at least 200 million euros by 2020.

Support for global restoration of forests

The New York Declaration on Forests of 2014 took up the objectives of the Bonn Challenge. In this declaration over 190 countries, businesses, civil society organisations and representatives of indigenous peoples committed to halving worldwide deforestation by 2020 and halting net natural forest loss by 2030. In addition to the Bonn Challenge's target of restoring 150 million hectares of forest, the signatories to the New York Declaration aim to restore another 200 million hectares by 2030 – making a total area of 350 million hectares. At the 21st meeting of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in December 2015, civil society groups and a host of heads of state and government stressed the importance of protecting forests in combating climate change. What is known as the GNU initiative (short for the three largest donor countries in the field of forest conservation: Germany, Norway and the United Kingdom), also announced that it would make a total of 5 billion US dollars available within the REDD+ framework between 2015 and 2020 to protect and restore tropical forests, if developing countries make robust progress in forest conservation. The IKI is supporting this strategy with selected projects.

Financial incentives for climate-friendly action

REDD+, which is part of the UNFCCC, is an important approach to combating climate change by conserving forests. The basic idea is that developing countries receive financial compensation for measurable and verifiable reductions in GHG emissions that have been achieved through forest conservation measures. REDD+ not only helps to reduce deforestation and degradation of forests, it also promotes sustainable forms of forest management, which play a valuable role in mitigating climate change, conserving biodiversity and supporting economic development in the areas in question.

Protecting forests and using them sustainably

Through the IKI, BMUB supports worldwide endeavours to protect forests. First and foremost, it helps the partner countries with practical implementation of REDD+ and sustainable use of forests. **Green Growth in the Heart of Borneo** (HoB) is a transborder IKI project that focuses on a conservation and use concept for a pilot region in one of the world's most species-rich rainforests. Heart of Borneo (HoB) is the name given to a large part of the island with over 22 million hectares of forest in Brunei, Indonesia and Malaysia. HoB is not only one of the areas in the

PROJECT EXAMPLE

Project Title: Green Growth in the Heart of Borneo: Integrating conservation, economic development and well-being of communities across a transboundary landscape

Countries: Indonesia, Malaysia

Implementing Organisation: World Wide Fund for Nature (WWF)

BMUB grant: 4.22 million euros

Duration: 2016 to 2020

world with the richest biodiversity, it is also home to, and the source of income for, at least 11 million of Borneo's inhabitants, including one million indigenous Dayaks. The tropical rainforest is threatened primarily by land being converted for agricultural uses such as palm oil or rubber plantations, and by the high rate of deforestation those uses involve.

An area of approximately 1.13 million hectares within and beyond the transborder HoB forest corridor between **Indonesia** and **Malaysia** is currently being used for a pilot project. In conjunction with the private sector (for example palm oil producers), local communities and indigenous groups, the governments of the Indonesian province of West Kalimantan and the Malaysian state of Sarawak are developing and implementing a land-use plan and a Green Economy Action Plan. The information and experience gained in the pilot project will be used as the basis for further action plans and land-use plans in the entire HoB area.

In West Africa, the IKI will in future support Ghana in establishing sustainable and efficient wood energy value chains. The country's forested area is decreasing by two per cent each year. Charcoal production is one of the main causes of forest degradation. The starting situation in Ghana is typical for West Africa – which means that potential solutions would be transferable.

The project, which GIZ is carrying out, supports the partner institutions in 10 target communities to work together with small charcoal-producing businesses and organised producer groups to restore forest landscapes and reduce the pressure on forests. That involves creating incentive mechanisms for sustainable production, implementing reforestation measures for sustainable production of wood for fuel on damaged areas and improving energy efficiency.

PROJECT EXAMPLE

Project Title: Development of business models to address drivers of deforestation

Countries: Ethiopia, Ecuador, Colombia, Paraguay, Vietnam

Implementing Organisation: UNIQUE forestry and land use GmbH

BMUB grant: 1.91 million euros

Duration: 2014 to 2017

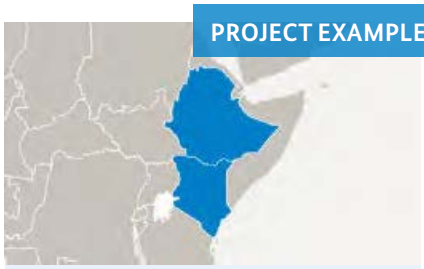
Climate action increases prosperity

Working to mitigate climate change and conserve biodiversity can be economically worthwhile. That has been demonstrated by an IKI project running since 2014, carried out by UNIQUE forestry and land use GmbH. The aim of the project, entitled Development of **Business Models to Address Drivers of Deforestation**, is to support national and regional endeavours to implement REDD+. To that end, it is exploring and testing business models and associated institutional mechanisms. The project began by conducting a study in **five countries** to identify the direct and indirect drivers of deforestation and assess promising business models. The second phase of the project concentrated on **Vietnam** and **Colombia**. Its objective was to develop detailed business models and institutional mechanisms. The outcome: the business models established by the project can make a significant contribution to mitigating climate change and conserving biodiversity – both by converting plantations into mixed forests in Vietnam and by sustainable intensification of livestock farming in Colombia. Both approaches are also economically attractive.

The restoration of forest ecosystems and natural landscapes in **Kenya** and **Ethiopia** was the focus of an IKI project entitled **Catalyzing Forest**

and Landscape Rehabilitation for Climate Resilience and Biodiversity Conservation in East Africa. The forests and landscapes of the region act as an important carbon sink and are also of central importance for the livelihoods of the local people. The project therefore took the approach of combining sustainable agricultural use with restoration of the forests. The project ran from February 2014 to December 2016 and was implemented by the Clinton Foundation's Clinton Climate Initiative and its partners WRI and the Green Belt Movement. With the support of the Kenyan and Ethiopian environment ministries, the project mapped areas throughout both countries that had the potential to be restored. Working directly with communities, the implementing organisations restored landscapes on pilot areas in both countries to demonstrate best practices. In Kenya, the project supported the establishment of 22 community tree nurseries, which are tended by over 300 members of the community. The project also organised reciprocal visits for Kenyan and Ethiopian small-scale farmers to enable them to share agricultural and forestry practices and visit demonstration sites. In this way, they were able to benefit from each other's knowledge about medicinal plants, for example. They also learned about different methods for land and water management and options for preventing soil degradation and deforestation.

PROJECT EXAMPLE



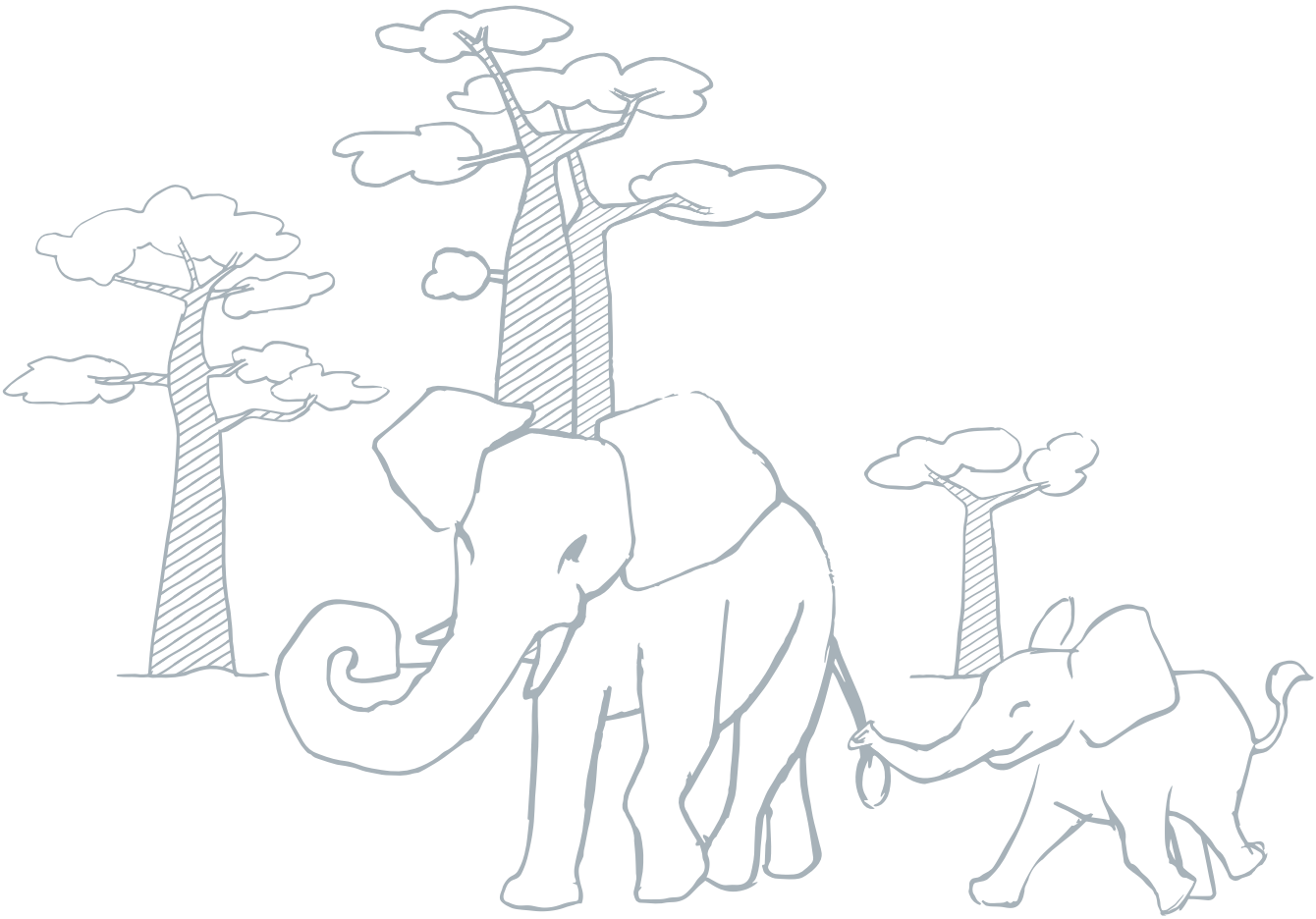
Project Title: Catalyzing Forest and Landscape Rehabilitation for Climate Resilience an Biodiversity Conservation in East Africa

Countries: Ethiopia, Kenya

Implementing Organisation: Clinton Foundation – Clinton Climate Initiative

BMUB grant: 1.52 million euros

Duration: 2014 to 2016



Coral reefs not only provide a habitat for innumerable animals and popular destinations for diving, they are also the last line of defence against incoming waves, storms and rising sea level.

Conserving biodiversity and safeguarding livelihoods

Biodiversity – the Earth's wealth of ecosystems and species, and the genetic diversity of species – is essential to human life: flora, fauna, fungi and microorganisms purify the water and air, keep soil fertile, ensure a comfortable climate, supply our food and are crucial for human health and well-being.

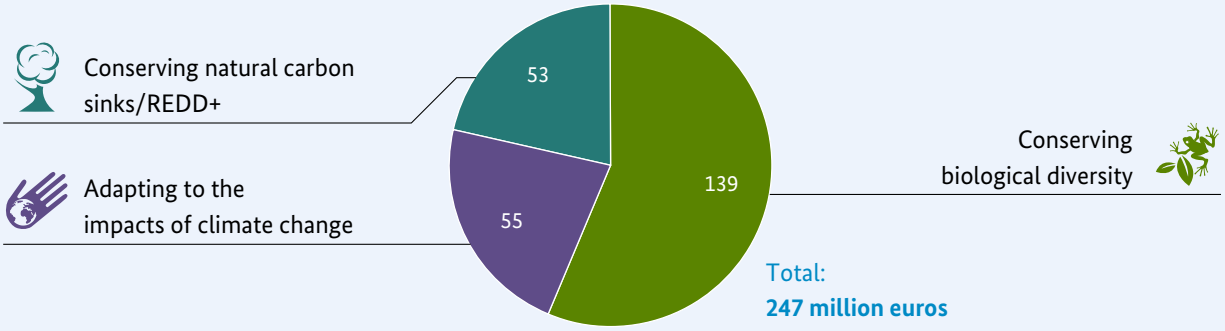
Biodiversity is threatened globally in many different ways by human activities: habitats are being destroyed by pollution, construction of settlements and roads, logging, industrialised agriculture and non-sustainable types of use. Although the process of biodiversity loss continues unabated worldwide, the increasing urbanisation of society means that people in many places are not even aware of it. Only when the balance of nature is lost will we realise that we rely on its services day in day out. The continuing loss of biodiversity jeopardises the options for economic, social and cultural development available to our generation and future generations. Without functioning ecosystems it is virtually impossible to buffer the effects of climate change and natural disasters, which makes their impact greater. It is difficult, or impossible even, for damaged ecosystems to perform their services. Without biodiversity, the resilience and adaptability of nature and humankind are jeopardised. This means that conserving biodiversity is an important field of work in environmental and development policy.

The binding international legal framework for this is the CBD. This convention goes far beyond 'traditional' approaches to nature conservation. It addresses sustainable use – which includes the

economic potential of natural resources – as a key aspect of biodiversity conservation. In addition to this, the fair and equitable sharing of benefits arising from the use of genetic resources plays an important role. This aspect of the convention takes into account the need to improve development opportunities for poorer countries that are often rich in biodiversity. The CBD seeks to reconcile the environmental, economic and social aspects of how we treat biodiversity and in that sense it is the most comprehensive international agreement in the field of nature conservation and development policy. Taking biodiversity into consideration in all political and private-sector decision-making – which includes agriculture and fisheries, transport and mining, education, finance and taxation systems – was at top of the agenda in 2016 under the heading of mainstreaming at the 13th meeting of the Conference of the Parties to the CBD (COP13) in Cancún, Mexico. The IKI was able to demonstrate experience with projects in this field, for example with integrating ecosystem services in nature reserves into policymaking and corporate decision-making in Mexico.

From the outset, IKI has funded projects that deliberately make use of the potential for synergy between climate change mitigation, adaptation to climate change and conservation of biodiversity. Measures to reduce poverty are also often a direct component of IKI projects.

Share of IKI funding volume relevant to conserving biological diversity in the IKI funding areas (2015/2016, in million euros) according to Doha accounting method



Source: BMUB | Total funding volume of the areas according to accounting method by commitment: 169 million euros. This accounting method is used for international CBD reporting.

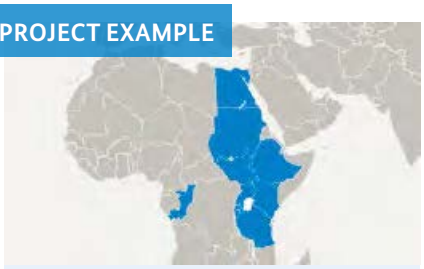
Supplementing existing activities, supporting implementation

At their meeting in Nagoya, Japan, in October 2010 (COP10), the Parties to the CBD agreed on the Strategic Plan for Biodiversity 2011 to 2020. This plan has five strategic goals, which are defined more precisely by 20 key targets known as the Aichi Biodiversity Targets, or just Aichi Targets. In its funding area concerned with conserving biological diversity, IKI finances projects that implement the Strategic Plan and contribute to meeting the Aichi Targets. The measures funded by the IKI are based, as far as possible, on the partner countries' National Biodiversity Strategies and Action

Plans (NBSAPs) and their associated strategies for mobilising resources. The idea is that they should supplement existing activities at regional, national and international level and support their implementation.

Paying greater attention to green infrastructure

PROJECT EXAMPLE



Project Title: Biodiversity conservation and sustainable use of ecosystem services in wetlands of transboundary significance in the Nile Basin

Countries: Burundi, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, The Democratic Republic of Congo, Uganda

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 6 million euros

Duration: 2015 to 2020

A new regional IKI project in Africa deals with two specific Aichi Targets – those concerned with safeguarding and restoring ecosystem services, and mainstreaming biodiversity conservation into political and sectoral planning processes. The project, which GIZ has been carrying out since October 2015, focuses on **developing a sustainable system for managing the water resources and conserving the wetlands of the Nile basin**. The Nile and its main tributaries cross about 70 large wetland areas that are of vast importance for conservation of species diversity. They also perform important ecosystem services, which help increase resilience to the impact of climate change: for example, they regulate high and low water levels and water quality. The wetlands are also extremely important for local people's food supply.

The Nile riparian states set up the Nile Basin Initiative (NBI) in 1989 in order to create a common framework for coordinating the development and management of the water resources. Germany has supported this initiative from the outset, including supporting the NBI Secretariat in an advisory capacity. To date, the NBI has primarily implemented infrastructure measures for hydropower and irrigation. By contrast, insufficient attention has been paid to the wetlands and the increased use of ecosystem services, also known as 'green' infrastructure.

This is the issue the above-mentioned project sets out to tackle: it strengthens the capacities of the NBI and the riparian states to conduct sustainable transboundary management of relevant wetlands and implements measures to build knowledge. Through the newly formed Nile Basin Wetlands Forum, the project has brought together the stakeholders whose collaboration is vital if the wetlands are to be effectively protected: the institutions at executive level responsible for river basin planning and for management of the wetlands, along with the national focal points for the Ramsar Convention on Wetlands and the CBD. Minimum ecological drainage flow is now an important criterion to ensure that the wetlands are permanently conserved.

In this way, the project contributes to conserving biodiversity, to ecosystem-based adaptation to climate change and to regional cooperation, which in turn strengthens peace and security in the Nile region. It also acts as a multiplier – especially for north-east Africa, but also for other international river basins.

Good administration and management of protected areas

The IKI project entitled **Protected Area Solutions for Biodiversity and Climate Change**, which is being implemented in **Kenya, Colombia, Peru** and **Vietnam**, supports the achievement of several Aichi Targets at the same time. The implementing organisation is IUCN. The aim of the initiative, which was launched in November 2015, is to improve the quality of governance in at least two protected areas in each of the four partner countries. To this end, the project is working on achieving compliance with the IUCN Green List Standard, which is an international catalogue of criteria for assessing the performance of protected areas. It can be used to evaluate biodiversity and climate change measures in the protected areas. In Kenya and Vietnam, the project will focus particularly on marine protected areas and wetlands. They are an essential factor in economic growth and resilience to climate change and hence vital to safeguarding the livelihoods of the local people.

Ultimately, the project is seeking to establish a global network to link the partner countries and promote improved management of the protected areas. It is also aiming to strengthen the capacities of local and private protected area managers and support information sharing.

PROJECT EXAMPLE

Project Title: Protected Area Solutions for Biodiversity and Climate Change

Countries: Colombia, Kenya, Peru, Vietnam

Implementing Organisation: International Union for Conservation of Nature (IUCN) – Switzerland

BMUB grant: 3,37 million euros

Duration: 2015 to 2019

Strengthening resilience and conserving ecosystems

Protected areas can make an important contribution to solving the climate problem. This is demonstrated by IKI's project entitled **Increasing the Resilience of the Amazon Biome**, which was implemented by the World Wide Fund for Nature (WWF) between 2013 and 2016. The IKI cooperated with a number of regional institutions such as the Latin American network of protected areas (RedParques), the environment ministries of **Brazil** and **Ecuador**, and the national parks authorities of **Colombia** and **Peru**. The Amazon biome covers an area of 6.7 million square kilometres and crosses the borders of nine South American countries. It comprises rainforests, savannahs and water bodies.

The project worked towards making systems of protected areas integral elements of climate change strategies in the Amazon biome. It supported the Amazon Conservation Vision, which was developed by the Amazon countries to increase the resilience of the Amazon biome to climate change and conserve its ecosystem services. To this end, the project analysed the biome's weak spots and its possibilities for adapting to climate change. The project partners also integrated climate change adaptation measures into protected area management plans.

One of the project's important achievements was the Declaration on Protected Areas and Climate Change, which RedParques, the Latin American network of protected areas, presented at the Paris Climate Conference in December 2015 and which attracted extensive media coverage. The Declaration was signed by 18 countries and presented in conjunction with WWF and BMUB, with the support of Peru's Environment Minister Manuel Pulgar Vidal. It calls for protected areas to be integrated into the national and global climate change planning and

PROJECT EXAMPLE

Project Title: Increasing the Resilience of the Amazon biome

Countries: Brazil, Colombia, Ecuador, Peru

Implementing Organisation: World Wide Fund for Nature (WWF) – Germany

BMUB grant: 1.94 million euros

Duration: 2013 to 2016

finance regime. It also stresses the key role of protected areas as a natural and cost-effective solution to mitigating GHG emissions and adapting to climate change. And it was successful: the Paris Agreement makes reference to the link between protected areas and climate change in a number of sections and articles.

PROJECT EXAMPLE

Project Title: Sustainable Management of Coastal and Marine Protected Areas

Country: India

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

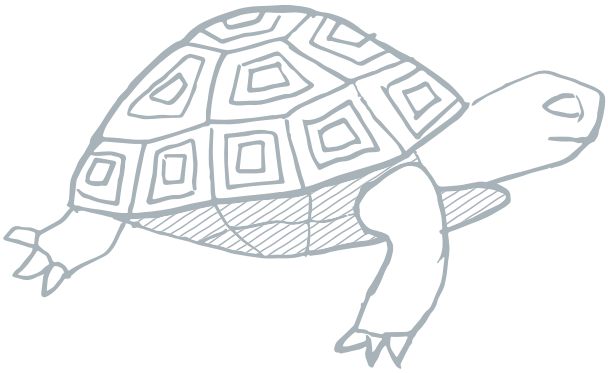
BMUB grant: 9.6 million euros

Duration: 2012 to 2017

The IKI project entitled **Sustainable Management of Coastal and Marine Protected Areas**, which began in August 2012 and is being carried out by GIZ, focuses on protected areas in India's coastal zone. The project is developing and implementing models for protecting and sustainably managing selected protected areas in coastal zones with the aim of preserving biodiversity and the livelihoods of the local population. These models are being implemented with the participation of public, private and local stakeholders.

Seven pilot projects are to be carried out in the states of Goa, Gujarat, Maharashtra and Tamil Nadu. These projects deliver training measures to improve the knowledge base and capacities of the Indian partners in sustainable management in the coastal zones and increase the opportunities for Indian business and local interest groups to participate. International experience is enhancing existing knowledge and is adapated to the situation in India. Collaboration with leading training institutions in the fields of forestry, fishing and the media is helping to integrate important training elements for future managers of protected areas in the coastal zone into existing courses. Media and communications work is raising the population's awareness for the value of biodiversity and providing information about methods for its conservation and sustainable use.

The project is supporting the government in Maharashtra in designating a 17-square-kilometre mangrove area in Thane Creek (Mumbai) as a protected area. Possible types of protected area were identified at five project sites. A plan for a small coastal village in Maharashtra to switch to environmentally sensitive tourism was piloted and produced around 35,000 euros in additional annual revenue for the village's inhabitants. This has also made an important contribution to adapting to climate change since mangroves protect coastlines from erosion.

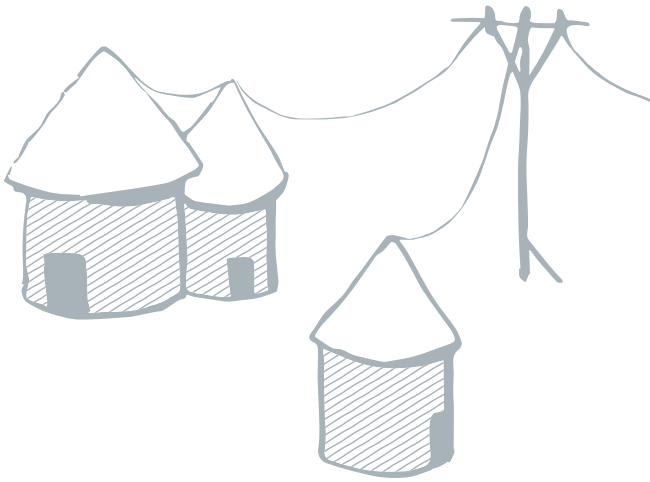


Towns and cities are already responsible for about 70 per cent of global greenhouse gas emissions through energy generation in the industrial, transport, housing and waste sectors.

Sustainable urban development – crucial for people, the climate and biodiversity

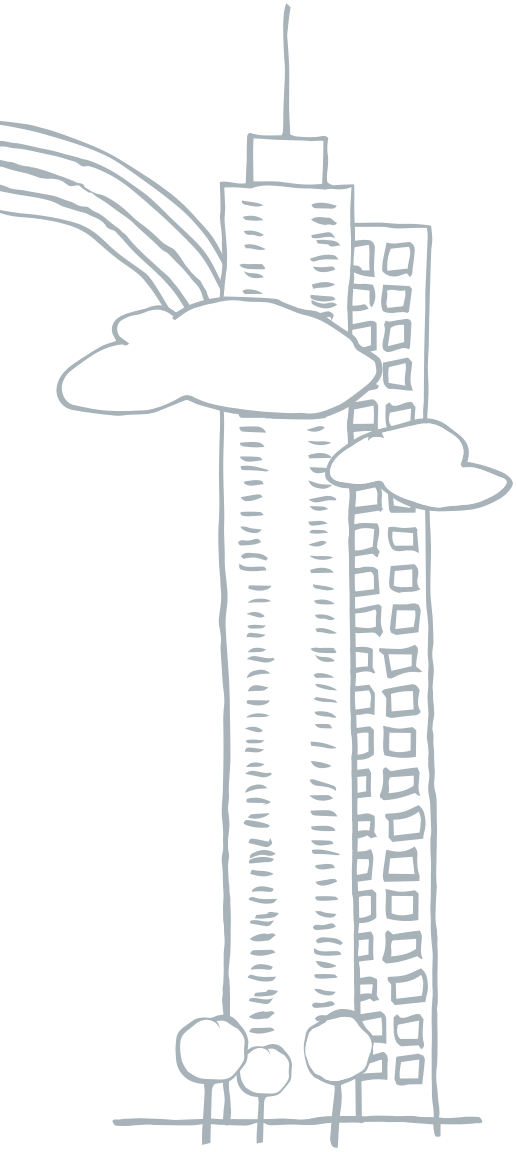
Even today cities are home to more than half the people on our planet. Experts estimate that by 2050 as much as 70 per cent of the world's population will live in urban areas.

Even though living in cities has a lower impact on resources than living in rural areas, cities are responsible for more than two thirds of GHG emissions worldwide and have an impact on biodiversity. At the same time, cities are particularly threatened by the effects of climate change such as water scarcity, heat waves, rising sea levels, floods and hurricanes. Cities near river deltas or the coast are particularly affected by the latter. City residents rely on intact ecosystems, regardless if these are close by or far away. This becomes evident when, for example, good air quality and access to clean water or recreational areas are in jeopardy. The increasing significance of cities as places for people to live, on the one hand, and their contribution to achieving national climate and biodiversity protection targets, on the other hand, show the importance of sustainable urban development strategies.



GHG emissions in urban areas of emerging and developing countries are constantly on the rise. A rapidly growing energy demand is a major factor for this, which is also triggered by increasing mobility as motorisation becomes more widespread. It is crucial that action be taken to counter this trend. However, it will only be possible to reverse it if integrated, strategic and sustainable development of urban areas not only leads to climate targets being met and the negative consequences of climate change being weakened, but also increases the quality of life for their inhabitants.

Cities have a significant impact on biodiversity as a result of environmental pollution, and sealing and conversion of land. However, urban areas also offer hitherto frequently untapped potential to increase the diversity of flowering plants and pollinating insects, which would also increase the well-being of city dwellers. Biodiversity-rich green spaces in cities can, for example, have a positive effect on the urban microclimate, and improve people's ability to grow their own fruit and vegetables. Fresh air corridors contribute to a cooler, more pleasant climate and the reduction of GHG. Urban planning should give greater consideration to the positive effects associated with flood protection or recreation, and prevent sealing of ecologically valuable soil at the same time.



The key role that cities can play in taking action to mitigate climate change was formally recognised for the first time at the 21st meeting of the Conference of the Parties to the UNFCCC (COP21) in Paris at the end of 2015, and their endeavours to date were also acknowledged. Sustainable urban development is also a cross-cutting priority in IKI's funding areas of mitigation, adaptation and biodiversity. The projects funded support partner countries in developing strategies for addressing climate change impacts in urban areas and develop sustainable and low-emission economic structures. Developing competencies and capacities for IKI's relevant partners at national and, even more so, at local level is supported by knowledge transfer, technology cooperation, policy advice and investment. The digital transformation of cities as part of smart-city approaches is one of the projects' priorities in the mitigation funding area, whereas adaptation projects focus on climate-resilient urban development. In the biodiversity funding area, projects address issues such as conservation of ecosystem services and promoting local recreation facilities.

The third United Nations Conference on Housing and Sustainable Urban Development – Habitat III – held in Quito (Ecuador) in October 2016, established global goals and objectives for sustainable urban development in its New Urban Agenda. The Member States of the United Nations also pledged to pay greater attention to cities in their policies and measures and to improve the enabling environment for achieving sustainable and integrated urban development.

Urban climate partnerships

A new collaboration between Germany and the **People's Republic of China** – the **Sino-German Urbanisation Partnership** – supports climate-friendly, integrated and sustainable urban development. The aim of the four-year project, which was launched in 2016, is to help intensify the existing bilateral dialogue on urbanisation between China and Germany. The partnership aims to help effectively reduce CO_2 emissions and at the same time improve the quality of life in cities.

GIZ, with 4.5 million euros in IKI funding, will implement the collaboration with the Chinese Ministry of Housing and Urban-Rural Development on behalf of Germany. In addition to promoting policy dialogue at national and subnational level, the programme of work also includes capacity building among German and Chinese experts from local authorities, businesses, the scientific and academic community, and associations. It will be flanked by a diverse range of communication and networking opportunities designed to promote an exchange of experience among towns and cities. The main issues to be explored are fundamental questions regarding sustainable integrated urbanisation and climate-related approaches such as resource and energy efficiency, water management, circular economy and sustainable transport. A good deal of attention will also be given to public participation.

To ensure the project content reaches the relevant policy and sector networks, specifically targeted communication activities are planned at national, subnational and local level. Both partner countries are seeking to drive forward technological progress through an intensive exchange of ideas and experience. This will enable German businesses and research institutions to help shape sustainable, environmentally sound and climate-friendly urban development with innovative solutions.

PROJECT EXAMPLE

Project Title: Sino-German Urbanisation Partnership

Country: China

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH – China

BMUB grant: 4.88 million euros

Duration: 2016 to 2020

An integrated view of mitigation, adaptation and urban development

The Cities Fit for Climate Change project was launched in selected towns and cities in **Chile, India** and **South Africa** at the end of 2015. The aim is to develop and refine strategies to tackle the challenges climate change is posing for cities and to identify financing options. What distinguishes this project from others is that reducing GHG and adaptation to climate change are regarded as part of an integrated urban development approach and dealt with in this very context. IKI funding for the three-year project, which is based on the Leipzig Charter on Sustainable European Cities and the Memorandum on Urban Energies, will total 3.5 million euros.

GIZ supports the project cities – Chennai (India), eThekwini/Durban (South Africa) and Santiago de Chile (Chile) – in using urban planning strategies to adapt to climate change. The project could make use of findings in some predecessor projects such as ClimateAdaptationSantiago in Chile. Climate change is to become a strategic component of integrated urban development in the partner cities. GIZ advises city governments on development plans (land-use plans and binding development plans),

PROJECT EXAMPLE

Project Title: Cities Fit for Climate Change

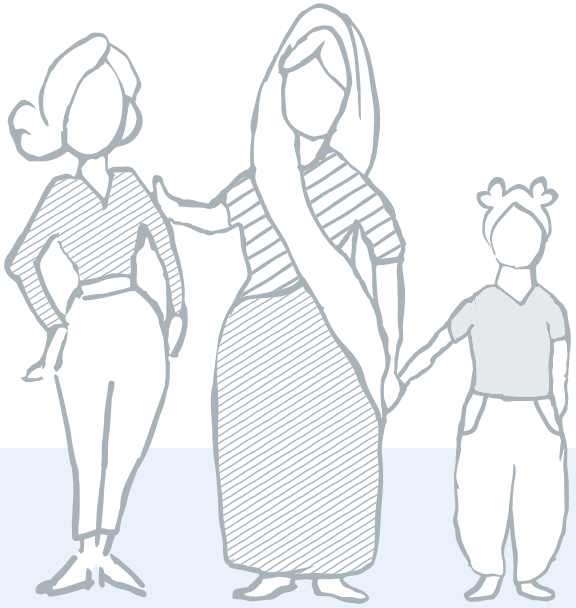
Countries: Chile, India, South Africa

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 3.5 million euros

Duration: 2015 to 2018

urban development strategies and urban design ideas. This is preceded by a thorough analysis and processing of existing concepts for resilient and low-emission urban development. The cities' plans, programmes and strategies and their associated investments will be developed to reduce emissions and make cities more resilient to climate risks. Increasing resilience is especially vital for cities near rivers or the coast, such as Chennai and eThekwini/Durban, as they face threats of increased flooding as a result of climate change. The aim is to conserve and create green spaces to facilitate runoff and retention systems, for example.



Gender equity and climate change

Technological and economic solutions are not the only factors that play an important role in tackling climate change. Social aspects such as gender are also extremely important. Alongside social factors such as income, background and age, gender also influences how people are affected by climate change, their attitudes to it and options for taking action. According to the United Nations, about 70 per cent of the world's poorest people are women. They are hardest hit by the effects of climate change such as droughts and flooding. To date, women have had fewer opportunities to exert influence, play a creative role or participate in, and thus contribute to, political processes to limit climate change. The reasons for climate change also have a gender-specific dimension: women and men have different mobility and consumption behaviour. Women's contribution to global warming is therefore significantly lower than that of men.

In order to prevent climate policy from further strengthening sex discrimination, the IKI has been funding projects on gender equity and climate change for some time now. The Gender into Urban Climate Change Initiative, which began in November 2015, integrates the issue of social and gender equity into the climate programmes of towns and cities in the Global South. The project is being carried out in India, Indonesia and South Africa. The implementing NGO, GenderCC – Women for Climate Justice e.V., is cooperating with national women's organisations in six pilot cities. In this way, the project is developing gender-sensitive strategies and measures and integrating them into local authority climate policy. At the same time, the project is also setting standards for implementing climate projects. That is creating a foundation for greater political participation for women and members of other disadvantaged social groups.

The experience gained by the Cities Fit for Climate Change project will be communicated beyond the project cities at international events and debates. For example, the project was very successful in feeding ideas and experience into a number of discussion and information events on shaping the New Urban Agenda at the Habitat III Conference held in Quito in 2016.

Producing energy from sewage

Sustainable urban development holds great economic potential for cities. This is demonstrated impressively by a pilot project in **India**, in which sewage and organic waste are processed in a biogas plant to recover materials and produce energy. The Indian city of Nashik in the state of Maharashtra is reducing its GHG emissions by recovering resources as well as producing and using renewable energy. The project demonstrates a cross-sectoral technological solution that is reproducible and financially feasible and makes it possible to achieve effective sewage and waste treatment in densely populated urban areas while contributing to energy supply at the same time. With this technology, the city of Nashik is making a contribution towards the Indian Government's ambitious climate protection targets.

The IKI is providing funding of 2.44 million euros for this collaboration between GIZ, the Indian Ministry of Environment and Forests and Nashik Municipal Corporation. A participatory public-private partnership (PPP) concept has been developed for the Indo-German collaboration, under which various actors in Nashik work together on the design and operation of the plant. The city of Nashik is also responsible for the plant's construction.

This technology has high potential for upscaling. National and international stakeholders have expressed great interest in the lessons learned from implementing the project, especially the demonstration plant and the PPP model of operation. The new large-scale national urban development programmes entitled the Atal Mission for Rejuvenation and Urban Transmission and Smart Cities Mission clearly illustrate the importance India already attaches to the sustainable development of cities. In this context, IKI projects can contribute to analysing, testing and implementing technological solutions in individual sectors and integrated planning approaches and work towards making successful projects reproducible.

PROJECT EXAMPLE

Project Title: Generating energy from waste water and organic waste

Country: India

Implementing Organisation: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

BMUB grant: 2.44 million euros

Duration: 2009 to 2017

Climate strategies for megacities

In the project 'ClimateAdaptionSantiago', the project partners developed measures to enable the metropolitan region of Santiago de Chile to adapt to climate change in the fields of energy, water and land use. Guidelines designed to help achieve smooth implementation of the individual measures were also drafted to support the adaptation plan.

With the help of IKI funding of around 1.4 million euros, the Helmholtz Centre for Environmental Research carried out the project with partner institutions in Chile. During the project's four-year term, German and Chilean research institutions and universities worked on the adaptation strategy with regional stakeholders. A broad spectrum of measures was developed at 10 round tables involving different interest groups, addressing the anticipated impacts of climate change on Santiago.

Researchers ascertained needs by identifying and specifying the anticipated changes and their impact on the region. They used a web portal to visualise the projected changes caused by climate change and the risks associated with them. For example, the scientists anticipate a significant rise in temperature and a drop in precipitation in the region. The situation is being further aggravated by the megacity's unabated growth. Unless the necessary adaptation measures are put in place, serious problems are expected – in connection with the water and energy supply, for example. A problem-specific strategy, such as the one developed in this pilot project, is therefore essential.

The project's participatory approach, involving local and regional actors, has strengthened the partners' competencies and capacities. This effect was further enhanced by a supraregional learning network comprising decision-makers from other megacities in Peru, Brazil, Argentina, Colombia and Mexico.

List of Abbreviations

BMUB	Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
BMZ	Federal Ministry for Economic Cooperation and Development
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CO_2	Carbon dioxide
COP	Conference of the Parties
EbA	Ecosystem-based Adaptation
ECF	Energy and Climate Fund
ETS	Emission Trading System
F-gases	fluorinated greenhouse gases
GCF	Green Climate Fund
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GNU-Initiative	Cooperation of for the three largest donor countries in the field of forest conservation: Germany, Norway and the United Kingdom
HoB	Heart of Borneo
IDB	Inter-American Development Bank
IKI	International Climate Initiative
INDCs	Intended Nationally Determined Contributions
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
JI	Joint Implementation
KfW	Kreditanstalt für Wiederaufbau
LCDS	Low Carbon Development Strategies
LDCs	Least Developed Countries
LEDS	Low Emission Development Strategies
MRV	Measurement, Reporting and Verification
N_2O	Nitrous oxide
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NBI	Nile Basin Initiative
NBSAPs	National Biodiversity Strategies and Action Plans
NDCs	Nationally Determined Contributions
NGO	Non-Governmental Organization
PPP	Public-Private Partnership
REDD+	Reducing Emissions from Deforestation and Degradation
REL	Reference Emission Level
SIDS	Small Island Developing States
SPA	Support Project for the Implementation of the Paris Agreement
TEEB	The Economics of Ecosystems and Biodiversity
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute
WWF	World Wide Fund for Nature

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