PROMOTION OF EMPLOYMENT THROUGH FINANCIAL COOPERATION – OVERVIEW AND SECTORAL APPROACHES
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Preface

Employment creates income and opens up the opportunity for a life without poverty. In addition, employment contributes to social recognition and enables individual fulfilment. If people have work they can live on, it strengthens social cohesion, prevents violence and establishes an important foundation for a country’s economic and social development.

However, according to estimates of the International Labour Organisation (ILO) in 2012 around 200 million people worldwide were unemployed. Another 900 million employees work under poorly paid, unregulated conditions and are poor despite work.

Lack of employment opportunities and future prospects are often a human tragedy for those concerned and an enormous waste of development potential for economies as a whole. Moreover, as a social mass phenomenon, underemployment and unemployment are associated with a high risk of violence and political instability, which can eradicate previous development successes and future development opportunities within a short time. However, they can also trigger positive change. Most recently, this was demonstrated by the uprisings of young people in Arab countries.

Against this background, the promotion of productive and decent employment is a central instrument of development policy to overcome poverty and enable peaceful and stable social development.

As part of Financial Cooperation (FC) on behalf of the Federal Government of Germany, KfW supports the creation of employment through a variety of approaches in different sectors in partner countries.

This reader summarizes the various approaches of employment promotion in Financial Cooperation. By way of introduction, it gives an overview of the typical employment effects of Financial Cooperation in general. The subsequent chapters analyse the impact chains of KfW’s activities in fourteen specific sectors.
I. Overview: Financial Cooperation and Employment

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Lack of employment opportunities and future prospects are often a human tragedy for those concerned and an enormous waste of development potential for economies as a whole. Moreover, as a social mass phenomenon, underemployment and unemployment are associated with a high risk of violence and political instability which can eradicate previous development successes and future development opportunities within a short time. However, underemployment and unemployment can also trigger positive changes. Most recently, this was demonstrated by the uprisings of young people in Arab countries.

According to estimates from the International Labour Organisation, 200 million people worldwide have no work. Around 900 million further people work in poorly-paid, legally unregulated conditions, living in poverty despite working.

The promotion of productive and decent employment is a central instrument of development policy to overcome poverty and enable peaceful and stable social development.

KfW Development Bank therefore supports a broad spectrum of measures to create productive and decent jobs in partner countries of Financial Cooperation (FC).

Employment creates income and opens up the opportunity of a life without poverty. In addition, employment contributes to social recognition and enables individual fulfilment. If people have work they can live on, it strengthens social cohesion, prevents violence and establishes an important foundation for a country’s economic and social development.

As part of Financial Cooperation (FC), KfW Development Bank is achieving significant employment effects through its projects. At the end of 2011, the project portfolio of KfW Development Bank comprised a total of 1,884 projects totalling €30 billion in many different areas of intervention.

Result chains – how financial cooperation promotes employment

The projects or measures supported as part of FC have various effects on employment, as Figure 1 illustrates. These can be broadly categorised into direct and indirect effects.

Direct employment effects in construction and operations

Included in direct employment effects are jobs arising directly from an FC measure. This comprises temporary jobs created during the construction or implementation phase of FC measures as well as permanent jobs in the subsequent operating phase.

In the case of infrastructure construction (such as wind parks, hospitals, sewage
Figure 1: Results chain for employment effects of FC

**Direct effects**
- Construction/Implementation
  - Construction firm/service provider carries out project
  - Construction firm/service provider employs staff
- Operations
  - Operations/maintenance
  - Operating company employs staff

**Indirect effects**
- Value chain
  - Construction firm/operator requires input
  - Supplied and buying firms employ staff
  - Beneficiaries increase local output
- Business climate and productivity
  - New business opportunities
  - Production costs
  - Labour productivity
- Local demand
  - Employees receive income
  - New and existing companies employ staff
  - New firms emerge
  - Existing firms increase productivity

Source: Own research

Treatment plants, rural roads, tourist infrastructure at nature reserves), employment arises with the construction company engaged to carry out the work. This is mostly restricted to the construction phase and is therefore temporary. Temporary employment can also arise at consulting firms for planning, construction supervision and supplementary measures (such as training operational staff, sensitization of target groups). However, a sequence of temporary jobs may eventually lead to permanent jobs in construction and consulting businesses.

Further permanent jobs generally arise for the operation and maintenance of built infrastructure, for example for mechanics in hydropower plants or teachers at schools. Financial institutions need loan officers for the revolving use of FC funds; that is, the granting of additional loans after the first cycle of loans has been repaid by the borrowers.

FC measures are primarily aimed at eliminating a development bottleneck such as inadequate power supply, a lack of transport connections or a lack of credit for firms. In most cases, therefore, the promotion of employment is only an additional or intermediate target. Only in the event of crisis prevention and reconstruction after natural disasters is the rapid creation of employment the main focus of FC measures. For example, this includes FC measures to reintegrate former soldiers or for unemployed young people in slums and refugee camps by setting up businesses and gaining professional qualifications, or FC measures for the rapid restoration of destroyed basic infrastructure such as schools or streets by means of labour-intensive construction programs. To the extent that the measures also help to temporarily bridge a crisis situation (by reducing the potential for violence and creating income possibilities), even measures carried out for a limited period can have a sustainable positive effect over time.
Indirect employment effects
In the case of most FC measures, indirect employment effects are significantly more important than direct effects. They occur along the value chain, through a better business climate and better productivity or through increases in local demand (cycle effects).

Indirect employment effects are achieved in upstream stages of the value chain which supply FC measures with services and intermediate products. In the case of FC measures designed to equip schools and provide teaching and learning materials, there are, for example, important indirect employment effects on the manufacturers of school furniture, textbook publishers or printers. In the same way, FC measures concerned with improving the water supply also contribute indirectly to employment with manufacturers of pipes, water pumps or chemicals.

At the same time, the results of FC measures are partly also preliminary work for downstream production processes, enabling corresponding expansions in production and employment in downstream industries. For example, this is the case if agricultural products such as vegetables or cereals grown as part of irrigation projects can later be processed by other companies.

Companies in developing and emerging markets regularly see poor business climate such as a lack of access to financial services, electricity and qualified workers as the main barriers to their growth. Against this backdrop, FC measures to improve the business climate and productivity make up an important prerequisite for the development of the private sector, which in turn requires labour.

The FC is addressing the lack of access to financial services as part of financial sector development. The loans supported by FC enable businesses to be set up or allow investment in the expansion of existing companies, generating permanent self-employment and employment of workers. In the particular case of microcredit, women often form the majority of borrowers and can benefit overproportionally from the employment effects.

Likewise, investments in energy supply, telecommunications or transport links open up new business opportunities (for example, by means of better market access, new products or the introduction of more efficient machines). They lower companies' production and transaction costs and increase their competitiveness.

Investments in school and vocational training as well as drinking water and health are directly oriented towards basic needs but also improve the "employability" of local workers and increase their efficiency. They raise labour productivity and reduce illness-related absences from work. Less time is also needed for taking care of sick relatives, which particularly benefits women due to the traditional distribution of roles.

To summarise, FC measures help to ensure that new companies can be established and jobs can be created. At the same time, existing companies benefit

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from a better business climate and can increase their productivity. This improves competitiveness and enables growth, which again can lead to new jobs.

All newly created jobs, whether directly through FC measures or indirectly with existing or newly established companies, strengthen local demand afresh by means of income multipliers. Part of the additional income is spent on local products, for example by workers who buy food from local traders during the construction of a hydropower plant financed by FC, or by a female tailor who purchases a new sewing machine using FC-financed microcredit to enable her to increase her production, and who ultimately buys more fabric at the local market.

Tradeoffs between employment promotion and other development goals

For practitioners, conflicts of interest arise regularly between the different areas of intervention supported by the FC. For example, nature conservation is often in direct competition with other forms of land use that can also create jobs and stimulate growth, such as agriculture, mining or power generation. The case study of KAZA (see box below) demonstrates that there are often ways to resolve or at least to alleviate these conflicts of interest to the satisfaction of all concerned.

Win-win situation for employees and environment - FC case study KAZA

In the border region of Angola, Botswana, Namibia, Zambia and Zimbabwe, the largest transfrontier nature reserve on Earth, KAZA, was opened in 2012. KfW provides €20 million of support on behalf of the German federal government. This project is not only intended to protect nature but also to create jobs. The wandering wildlife attracts nature tourists. Therefore, park keepers and rangers are needed and also tourist guides and drivers; in this way, jobs are created for the mostly poor local population. Anyone operating a guest lodge in the reserve must recruit half of their employees from the region. Approximately seven to eight tourists create one job, which in turn can feed up to 15 people. In total, KAZA may lead to several thousand new jobs and the local population no longer regards conservation as a threat but as an income opportunity.

It is important that the short-term focus on employment effects does not impede the necessary long-term structural change. The introduction of new technologies or organizational restructuring can destroy jobs short-term. However, on a long-term basis this structural change is indispensable for creating new, competitive jobs. Negative employment effects can potentially arise in the short-term, if for example unproductive jobs have to be cut in agriculture or in inefficiently operating power suppliers to ensure economically sustainable power supply that is cost-effective for the user. Negative employment effects can also arise if professional, modern waste disposal companies replace informal waste pickers or if improvements in central water supply decrease demand for bottled water and with it, the sales of producers and retailers of water bottles become less significant.

Measurability of employment effects

Direct employment effects are usually relatively easy to measure, though their scope is often limited. Ascertaining all indirect employment effects arising from a particular measure is much more complex and requires, for example, knowledge
of the sectoral interrelations within an economy.

In order to calculate not only the gross but also the net employment effect, the growth in certain jobs achieved must be contrasted with the resulting eventual reduction in other jobs (displacement effects). The calculation becomes even more complicated if taking into account the differing productivity and qualities of the newly created and displaced jobs. Including the effect period (short-term versus long-term), the geographical aspect (domestic versus foreign, city versus country) and the preservation of existing jobs into the analysis further increases complexity. For example, many microcredits are used to increase productivity and secure the borrower's self-employment rather than to quantitatively increase employment.

Creation of not just more, but also better jobs
Not all jobs are equally valuable. For KfW Development Bank, it is important to contribute towards creating new, better jobs that enable decent employment and sustainable development.

More decent working conditions
FC projects very often include components that improve the quality of jobs (professional qualification measures, occupational safety, environmental and social standards, job security, remuneration etc.). For example, in the case of rural water supply, local workers are trained as pump mechanics to maintain the newly built wells. Particular attention is paid to noise protection and occupational safety at power plants. As part of education projects, efforts are made to ensure that primary school teachers receive a sufficient salary and are not reliant on pursuing a second job during teaching time. Meanwhile, in agriculture, the income of small farmers is increased thanks to improvements in productivity.

Giving young people prospects
Young people have an increased tendency to be disproportionately strongly affected by unemployment, poor pay, precarious employment contracts and employment in the informal sector. The high level of youth unemployment is particularly serious in the Middle East and North Africa, where it has reached 25 per cent and is four times higher than the rate amongst adults. In some countries such as Tunisia, youth employment has already exceeded the 30 per cent mark. The lack of employment opportunities and future prospects is directly responsible for high levels of frustration and readiness to use violence amongst young people.

Amongst other things, KfW is seeking to integrate young people in the labour market and give them new prospects by means of vocational training. In such cases, close cooperation with the private sector is an important element in project design. Training should be aligned as closely as possible with the requirements of future employers and should be practically oriented. In this way, for example, an average of 70 per cent of the graduates of vocational training centres supported by KfW in the Philippines obtained a job, compared with 22 per cent in unsupported centres.
Green Jobs: Jobs with a future?

Green Jobs that contribute substantially to protecting the environment are being extensively discussed at present as part of a sustainable economy. The concept combines the topics of environment and employment. The definitions are as diverse as the estimates for the potential number of Green Jobs. In the FC’s partner countries, the greatest potential for Green Jobs can be seen in the renewable energy sector in emerging markets. In developing countries, an increase in Green Jobs for managing natural resources is expected, including eco-tourism. KfW does not just support the demand for employees in Green Jobs by means of investment in renewable energy or the establishment of nature conservation parks. KfW also contributes on the supply side of the labour market in improving the qualifications of workers so that these can benefit from increased numbers of Green Jobs available.

Training young people for Green Jobs - FC case studies REMENA and SAWC

The REMENA Masters programme - "Renewable Energy and Energy Efficiency for the Middle East and North Africa Region" - is a collaboration between Cairo and Kassel Universities. Its background lies in the great potential for wind and solar energy in North Africa and a large, unsatisfied demand for energy. At the same time, the region faces the challenge of integrating a large number of unemployed young people into the labour market. The REMENA Masters course was initiated by the Federal Ministry for Economic Cooperation and Development and is supported by KfW. In 21 months, the students become acquainted not only with the technical fundamentals of renewable energies but also learn much about their management, funding and legal basis.

At the Southern African Wildlife College (SAWC), 4,800 reserve managers from 24 African countries have already been trained since 1997. In one-year diploma programmes for the middle management of wildlife parks and in short courses for rangers on specific topics, the participants learn how animals are protected, how a wildlife park is managed cost-effectively and how successful eco-tourism concepts can be implemented. The college was founded with significant financial support from KfW and the World Wildlife Fund. By now, the college largely operates on an economically sustainable basis and has become a recognised training institution for park managers in Africa.

Local employment effects

KfW strives to achieve the greatest possible local employment effects. Where the complexity of the task makes it possible and economically feasible, construction and supply services are put out to tender in small batches to enable local businesses to participate. Even in the case of international invitations to tender, a majority of the employment resulting from construction projects falls to local workers, as international companies often recruit locally for cost reasons. The extent of local employment effects depends significantly on whether there are regional suppliers and local service providers that can take the opportunity to provide goods and services. In emerging markets such as India, where technology
markets are well developed and parts and materials are almost entirely produced domestically, the value chain effects are greater than in less developed countries in sub-Saharan Africa.

Knowledge building and exchange
Next to promoting employment by means of specific projects, KfW intensively tackles the topic of employment in impact studies, research projects, scientific collaborations and expert discussions both nationally and internationally. For example, through these activities the connections between employment promotion, growth and poverty reduction are analysed. The resulting knowledge is incorporated in the design of new projects and fed into international discussions via publications and specialist lectures so that others can also benefit.

Conclusion
On a long-term basis, poverty can only be effectively tackled if people have the opportunity to use their skills and time productively and are able to make a living from their earned income. Consequently, decent employment is an effective route out of poverty.

In recent years, the significance of employment has thus moved more strongly into the focus of debates on development policy, with good reason. Without targeted countermeasures, under- and unemployment will intensify in the future, particularly in sub-Saharan Africa, where the population is growing sharply at an above-average rate.

Through its projects, KfW is contributing both directly and indirectly in effective ways to preserving, improving and creating new jobs. These efforts must be intensified still further in the future in order to counteract the looming increase of under- and unemployment and to create prospects for the increasing number of young people.

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II. Sectoral Approaches of Employment Promotion

II.1. Agriculture and Employment

Author: Dr Jürgen Fechter

The importance of the agricultural sector for employment and prosperity

The agricultural sector is the main employer and driver of development in rural regions and partner countries of German Financial Cooperation (FC). According to FAO estimates, some 1.3 billion people work in agriculture around the world, 97 per cent of them in developing countries. Depending on the region, 30 to 50 per cent of household income in rural regions is generated directly through farming. The employment impetus for regional economic development is enormous, particularly where agricultural production goes beyond subsistence and supplies the food market or enterprises that process primary products. Employment in sectors closely associated with farming such as retail trade, services (transport, finance) and food processing is directly linked to agricultural output. The International Fund for Agricultural Development (IFAD) indicates that each additional US dollar earned in the agricultural sector generates another 30 to 80 cents outside the sector. In regions with a prospering and export-orientated agriculture, the World Bank has determined that as farmers’ incomes increase, more and better paid jobs emerge within and outside the agricultural sector as well (see box Regional impacts).

Regional impacts

A study conducted by the Seminar for Urban Development (Seminar für ländliche Entwicklung (SLE) on the impacts of irrigation projects running for 30 years under German Development Cooperation with Bolivia has revealed that income and employment effects from these projects are impacting very positively on other sectors. The study reports an increase in the demand for micro-loans, a near doubling of public suburban transport (more minibuses) and growth in the transport sector, agricultural trade and the local food service industry.

Surveys conducted under the same study among teachers in the Incahuasi region also showed that students are skipping class less frequently and are going to school increasingly better equipped with books, pens and writing blocks every year.

Challenges facing rural economies

Year after year, millions of jobs need to be created to provide employment and income for a growing population. McKinsey estimates that in Africa more than 120 million young people will enter the job market over the next 10 years, a

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large portion of them in rural areas. In India, rural regions will have to absorb another 4 million jobseekers each year; in Bangladesh, one million.

The agricultural sector will not be able to meet this enormous challenge alone. However, its sustainable growth is of fundamental importance for the creation of additional jobs.

The overall conditions for the growth of the sector are favourable. Global demand for food, fibres, oils, medicinal plants, energy and other agricultural primary products is on the rise. Increasingly scarce resources such as water, farmland and biodiversity, as well as the impacts of climate change, are forcing adjustments. The agricultural sector must work more efficiently and sustainably and adapt faster to new environmental conditions. In addition, the rising number of people living in urban regions requires more processed foods.

**Irrigation and employment**

Irrigation projects financed by KfW in Latin America (Bolivia, Peru, Ecuador) and in Mali each cover some 500 to 1,500 hectares of land. Smallholders are the immediate target group. Installing irrigation systems to more areas allows farmers to dedicate some of their land to labour-intensive fruit or vegetable production. This generates substantial additional yields. The additional yield per hectare is worth EUR 500 and EUR 1,500 each year. The additional employment impacts achieved are obvious. Producing one hectare of grain takes around 30 days of labour each year, one hectare of onions, tomatoes or strawberries, 150 to 300 days. This is work that can be performed by the farmers themselves, family members or day labourers.

**Subsistence farming is not enough**

In virtually all of our partner countries, subsistence farming is no longer sufficient to ensure peoples' livelihoods. Smallholder families in Africa or Asia already generate only 50 per cent of their household income from their own production (see illustration). In addition to working on their own fields, they perform paid work within or outside the farming sector. Remittances from family members living in cities are becoming increasingly necessary to secure families' livelihoods. People are working long and hard, and still they have hardly enough to survive.

**Not just more but better work**

To improve the situation, farm workers and small farmers need to earn more for the work they perform, and better working conditions. Therefore, it is only at first glance that the high demand for jobs resulting from demographic trends appears to contradict the lack of employment that is evident in rural regions. Many farming operations – including small ones – have difficulties finding reliable seasonal workers or motivating family members to help out.
The reasons are obvious. In many partner countries, the type of work currently being performed in agriculture is unpopular, and people seize every opportunity to find other employment options. They prefer to migrate to cities – even without hope of finding work there.

The reason jobs in farming are so unpopular is not just the pay level, which is extremely low in comparison with work in other sectors. The work is also physically demanding and working conditions are poor. The International Labour Organisation (ILO) rates occupational hazards in agriculture as very high and records just as many fatal occupational accidents here as in mining or construction. Farm workers often cannot find year-round employment. Many people find work in the harvest season but are forced into idleness or labour migration the rest of the year. In years with poor harvest expectations there is also less work for seasonal workers which exacerbates an already precarious situation. In its 2008 World Development Report, the World Bank reports that millions of farm workers are trapped in poorly paid jobs. Poorly paid workers are also unmotivated and contribute to poor product quality, environmental degradation and the insufficient reliability of the sector.

**Better work**

The International Crop Research Institute for the Semi Arid Tropics (ICRISAT) documents experiences gained in Benin. In a project aimed at supporting women, changing from irrigation with buckets and watering cans to solar-powered drip irrigation brought about an enormous improvement in the quality of work and life. Instead of hauling water for five hours a day, women can now grow many times more vegetables in half the time. The main motivation for changing the production method was not to increase revenues but to relieve the women from the extremely exhausting task of hauling water.

**Agriculture can do more**

The agricultural sector has great potential to provide an essential contribution to both employment numbers and work quality. Every additional dollar earned from the sale of agricultural products provides substantial relief for poor rural households and eases demographic pressure. Even in regions with adverse climate, farming operations can earn additional income. According to a United Nations study, for example, organic smallholder farming in Sub-Saharan Africa holds the potential to increase yields by some 80 per cent. The study is based primarily on projections of results obtained in pilot projects and is very optimistic. Nevertheless, practical experiences gained by KfW show that significant income increases can be achieved in smallholder farming on various levels. In a project in Burkina Faso, for example, investments in simple erosion control measures have increased yields of sorghum or cowpeas by 30 to 40 per cent per hectare while the labour input has remained the same. Although this measure does not create new jobs, the farmers earn higher in-

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comes for the work they perform – and this is achieved in a structurally weak re-
gion of the Sahel with a limited job market.

Not all regions have the climatic, ecological and economic conditions necessary
for the introduction of irrigation systems. Where irrigation is possible and ecologi-
cally justifiable, the conversion from rainfed agriculture to irrigated agriculture has
a measurable positive impact on employment and incomes. The World Bank re-
ports on projects in Mexico where the conversion of maize production to tomato
production (under irrigation) provides work for over four times more people.
Evaluations conducted by KfW (see box: Irrigation and employment) in Latin
America and Sub-Saharan Africa shows similar employment impacts. Positive
impacts on employment in the non-farming sector can also be demonstrated (see
box: Regional impacts).

Modernisation for more employment
Migration, especially by young people, poor working conditions in the sector and
the growing demand for agricultural products are some of the factors that call for
the adaptation and modernisation of agriculture, especially in African countries
with an agrarian-based economy.

However, modernisation does not necessarily mean large-scale agro-industry
and monocultures that greatly minimise labour input. Small and medium-sized
farming operations that offer jobs for independent farmers and farm workers are
at the heart of this measure.

To modernise their farming operations, farmers not only need to have access to
capital from necessary investments but also entrepreneurial thinking, more train-
ing and specialised technical knowledge. In rural areas, access to these re-
sources is often problematic 6.

Partnerships with small farmers
Cooperation between farmers and the processing industry through contract farm-
ing provides a chance for regular, reliable income as well as access to expertise
and technical and organisational innovations. For example, German Devel-
opment Cooperation is supporting the cooperation between small farmers and
processing businesses in cotton or rubber production in West Africa. Today the
farmers are earning regular incomes. Another finding is that the partnership in
the production of cash crops has led to improvements in the production of staple
foods.

Sustainable private investments by enterprises which depend at least in part on
supplies from farming operations can make an essential contribution to technical
progress and to increasing employment and self-employment. The promotion of
such investments, for example through the African Agriculture and Trade Invest-
ment Fund (AATIF), can contribute to accelerate the rate of sustainable regional
growth.

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Conclusion
Rising food prices, the need for greater agricultural output and challenges posed by dwindling resources, climate change and, in particular, the growing world population are creating enormous pressure for economic reforms in rural regions.

A sustainably growing agricultural sector can generate decisive impetus and make significant contributions to the fight against poverty. Employment in agriculture and in sectors directly connected to agriculture plays a crucial role in achieving this.

In order to increase incomes and create jobs, it is imperative that the specific site conditions, market needs, demands of final customers or the processing industry are taken into account. Rural regions with favourable conditions for sustainable economic growth can be identified in virtually all partner countries of German Development Cooperation. In the context of safeguarding and creating employment, it is a promising start that our partner countries have begun to embrace this approach and are being supported by German Development Cooperation.

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II.2. Energy and Employment

Author: Dr. Henrike Koschel

Inadequate energy supply in many developing and emerging countries hampers productivity, competitiveness and private sector employment. Particularly poorer developing countries characterised by low capital and labour productivity, low earned income and high employment have a low electrification rate.

A reliable and high-quality supply of energy has positive effects on the living situation of the people and their opportunities for income as well as on the social and economic development and employment in a country.

Our Financial Cooperation (FC) projects create jobs both directly in construction and operation, as well as indirectly in the supply sector. In this regard renewable energies in particular show great employment potential, which can also be tapped in rural areas not connected to the electricity supply grid.

However, more important economically are the positive impacts on growth and employment over the medium to long-term which arise primarily through the productive use of energy services or increases in efficiency in a country. In this regard the overall efficiency and costs of supplying energy are an important factor for growth and employment outside of the energy sector. Therefore, along with climate impacts these are one of the most important criteria for evaluating KfW energy projects in developing and emerging countries.

Energy: Key factor for economic and social development

A secure and economically efficient supply of energy and electricity is a basic precondition for the development of trade and industry of a country.

The availability of electricity and modern fuels for cooking, heating and transport not only creates additional income opportunities in households, but also stimulates positive growth and employment effects particularly through the productive use of energy services through enterprises. The use of energy increases labour and capital productivity in the agricultural and the manufacturing sector, and enables the expansion of branches of production for which energy was thus far the limiting factor.

In its publication "Development needs sustainable energy", the German Federal Ministry for Economic Cooperation and Development (BMZ) also refers to the correlation between energy availability and economic and social development which many studies have proven empirically.7

The KfW energy portfolio in Financial Cooperation - renewable energies dominate

In light of the importance of an ecologically and economically sustainable energy supply for economic development, a key promotional focus of financial cooperation (FC) is the energy sector. This comprises plants for generating, transmitting and distributing electricity and heat, as well as programmes to increase energy efficiency.

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In 2011, KfW commitments for energy projects in developing countries and emerging countries amounted to EUR 1.3 billion or 30% of total FC commitments (EUR 4.5 billion). Renewable energies dominate the energy portfolio over the years 2007-2011 with a total share of 56%. Projects to construct and rehabilitate electricity grids accounted for 21% of the commitment volume, while thermal power plants such as coal or gas combined-cycle power plants accounted for 6%. Projects for increasing demand-side energy efficiency in private and public buildings or small and medium-sized enterprises accounted for the remaining share of the commitment volume.

Direct and indirect employment effects in construction and operation

Investments in electricity and water supply or measures to increase demand-side energy efficiency trigger immediate direct and indirect employment effects during a project's construction and operation phase.

A distinction is made as to where the jobs arise on the value creation chain. The direct employment effects comprise all jobs directly created by the measure in the energy sector. In this regard programme proposals for FC projects often include rough estimates broken down by employment during the

"Energy Access" and employment

The United Nations declared 2012 as the year of "Sustainable Energy for All". The goal is to help all people gain access to modern energy by 2030.

KfW promotes access to energy in the framework of numerous projects. These include projects to connect population groups to the national grid (plus the construction of necessary generating units) as well as decentralised solutions such as isolated networks, solar home systems or biogas plants to supply rural regions not connected to the grid.

One example is the solar energy programme in Bangladesh, in which KfW is promoting the installation of decentralised solar homes in rural areas not connected to the grid. In this way 750,000 people are supplied with electricity and benefit from new income opportunities, e.g. through lighting and use of communication technologies. According to the Global Status Report of REN 21, in Bangladesh the installation of 1.2 million solar home systems created 60,000 jobs in the solar industry alone*.

A further example is a project in Indonesia for rural electrification, where KfW (in cooperation with the World Bank) is providing USD 300 million to help approx. 200 villages gain access to modern electrical energy. Establishing isolated grids with photovoltaic and small hydropower plants largely substitutes expensive and environmentally harmful diesel generation and even enables lower productive electricity consumption.

construction phase and employment in the operation phase. Although the employment effects during the construction phase are considerably higher than in the operation phase, they are only temporary.

For example the construction of the 450 MW hydropower plant Shontong Karcham in India, which KfW, the Asian Development bank and the project-executing agency in India are jointly financing, will likely employ 3,000-3,500 workers over the six-year construction period and 250-300 people after completion.

Less qualified workers, often from the region, usually perform construction and assembly work. Operation, repair and maintenance work is carried out by engineers and technicians (unskilled and semi-skilled labourers) employed by the project-executing agency, creating local jobs. Since in general local expertise for project planning, implementation and supervision is lacking in the partner countries, foreign consultants are usually assigned these tasks.

*Indirect employment effects* are achieved during a project's construction and operation phase in all upstream economic sectors which supply the energy sector with services and intermediate inputs. The latter comprise for example plant components such as wind turbines or power generators, construction material, steel or fuels (e.g. biofuels) for the operation of plants. Determining all indirect employment effects is complicated and requires knowledge about the linkages between the important sectoral intermediate inputs. To what extent the indirect employment effects take place in partner countries or abroad depends greatly on whether there are regional intermediate input industries and local service providers which are eligible to participate in the framework of the required international invitations to tender for supplies and services. In industrialising countries such as India, where technology markets are well developed and plants are manufactured almost completely within the country itself, the indirect employment effects are higher than less developed countries in sub-Saharan Africa.

To what extent locally-based companies are contracted can depend (along with professional qualification) on the lot size in the invitation to tender. among other factors. Smaller lot sizes tend to promote companies in the region, however it must be noted that these are not always sensible based on efficiency reasons and are often not practical in the energy sector.

**More employment through renewable energy technologies?**

The global energy sector contributes 10-15 % to global GDP but employs only 1-2 % of the global workforce. These numbers clearly show that the energy sector is more capital than labour-intensive. New studies reveal that investments in renewable energies are associated with significant positive gross employment effects. According to the newest *Global Status Report* from REN 21, already more than 5 million people worldwide currently work directly or indirectly in renewable energy industries. In India the renewable energies sector accounted for about 350,000 jobs in 2009. Of these about 190,000 employees were working in the area of grid-connect solar energy, biogas and small hydropower. In the future significant employment potential is forecast for decentralised renewable energies in developing countries. The International Renewable Energy Agency (IRENA) estimates that decentralised electricity generation with renewable energies alone will create about 4 million direct jobs as part of the implementation of the goal.

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"Energy Access for All"\textsuperscript{9}.  

In addition, an evaluation of 15 studies for the USA shows that in the construction and operation of a power plant, renewable energies create more direct employment per unit of generated electricity (led by photovoltaics and followed by geothermal energy, thermal solar power, biomass and wind) compared to conventional energy technologies\textsuperscript{10}. Although these results are not directly transferable to developing countries, they point to the high employment potential of renewable energies.  

**Take into account repercussions for the rest of the economy**  
The direct and indirect gross employment effects should certainly not be the primary criteria in determining the selection of energy technologies. Equally decisive are questions regarding energy security and climate protection, but also productivity and cost efficiency in the provision of energy services. For example, there are major country-specific differences between the electricity production costs of individual energy technologies. Renewable energies are often still comparatively expensive, particularly when the costs for reserve capacities and energy storage to offset fluctuating electricity generation are taken into account. The costs also vary depending on the size of the generating plant and of the integrated network. 

High energy costs and electricity prices in the production sector increase the price level and weaken the competitiveness and demand for goods of other industries. The energy sector can have negative impacts on the rest of the economy, thereby causing job losses in other sectors. These negative effects can quickly more than offset the primarily positive employment effects. 

Therefore, in the framework of FC energy projects the criteria of productivity and cost efficiency are assessed and weighed against other criteria, such as employment effects, along with climate impacts. 

**Additional income creates employment**  
All investments with employment effects - whether they are made in the energy sector or other sectors - create not only employment in the industries involved in construction and maintenance through the demand triggered by the investment, but also through the fact that direct and indirect employees earn income that they spend on consumer goods. In turn this additional demand results in jobs and income in the corresponding consumer goods industries. This is called an income multiplier effect, which overall leads to higher demand for goods from other industries and thus to further positive employment effects.  

**Medium to long-term growth and employment effects through the productive use of energy**  
The productive use of additional or improved energy services in the trade, industry and services sector can generate medium to long-term employment effects that can greatly exceed the previously mentioned effects. Measures which ex-  

\textsuperscript{9} See IRENA, Renewable Energy Jobs & Access, 2012, p. 11  
pand and stabilise energy supply (e.g. by grid connection or additional electricity being fed to the grid) or make it less expensive (e.g. by reducing grid losses) contribute to economic growth. Many studies have already provided evidence on the empirical relationship between energy supply and (quantitative) economic growth or, expressed conversely, the negative relationship between a non-reliable electricity supply (blackouts) and economic growth. How developed a region is and to what extent a secure and adequate energy supply can activate unused productive capacities in the local economies will determine how much the production level and employment will increase in existing enterprises. New companies will enter the market, leading to further increases in employment.

Households and small businesses also benefit from a reliable electricity supply. This enables additional sources of income to be tapped. Examples include selling chilled food through the procurement and operation of refrigerators, or having longer opening hours through lighting at night-time.

**Project example: Job creation through rehabilitation of the grid in Mozambique**

Mozambique is one of the least developed countries in the world with a low electrification rate. The inadequate electricity supply poses a significant development bottleneck.

KfW had provided financing of EUR 18 million for two projects related to grid rehabilitation which have in the meantime been completed. The first one comprised the renovation of a 200 km long 100 kV power transmission line, which transports electricity from a hydropower plant from the provincial capital of Nampula to the port town of Nacala. The second project was aimed at rehabilitating the medium-voltage and low-voltage grids in Nampula and Nacala. This also included transformer equipment and 19,000 consumer connections.

Both measures were aimed at providing access to a reliable energy supply in the cities of Nampula and Nacala in order to contribute to commercial and industrial development.

That the projects were able to achieve these objectives is evident in the Ex post evaluation 2010:

As an indicator for economic growth in the region, electricity demand from households and commercial electricity customers grew by over 20% in both cities in the time period between project completion and evaluation.

In the last few years manufacturing industries, cement factories, dry docks and service providers have established themselves in the framework of a "special economic zone" in Nacala. The facilities currently under construction have alone led to the creation of 5,000 jobs. The mining industry and commercial agriculture in the province have also benefitted.

Likewise manufacturing companies have established themselves in the province of Nampula; also of note is the expansion of the deepwater port.

These growth and employment effects would not have been possible without the improved energy supply.

However, certain framework conditions are needed to unlock the positive em-
ployment effects of energy projects. This includes a business-friendly climate, free access to markets and corresponding sales possibilities. It is also important for end energy consumers to be able to finance investments with high initial costs, e.g. through access to low-interest loans\(^\text{11}\).

Last but not least, the modern supply of electricity and heat lead to positive growth and employment effects by increasing labour productivity through better health resulting from less harmful emissions locally, improved medical care (for example by securing cooling chains) and improved access to drinking water through electric pumps. Moreover, electrification of educational facilities as well as the lighting and use of modern information and communication technologies raises the education level and thereby labour productivity.

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\(^{11}\) See also: UNDP, Integrating Energy Access and Employment Creation to Accelerate Progress on the MDGs in Sub-Saharan Africa, April 2012.
II.3. Employment in Fragile Contexts

Author: Christina Kükenshöner
Editor: Sector and Policy Division Peace and Security

In fragile contexts employment serves a special purpose. It gets unemployed youth and ex-combatants "off the street", thereby reducing the danger of further outbreaks of violence. In addition to income, employment can also create identity and social networks and help develop an improved social coexistence. In fragile contexts employment is the engine for peaceful growth and thus an essential element for KfW's activities in fragile contexts.

The role of employment in fragile contexts

Fragile contexts are those in which states are not able to fulfil their fundamental duties and guarantee their citizens elementary services and security. This is often the result and cause of violent conflicts and repeated local, regional or country-wide outbreaks of violence. Therefore these countries often lack important basic infrastructure and there is legal uncertainty, corruption and distrust of the state institutions.

As a result fragile contexts provide difficult framework conditions for employment. At the same time surveys in the context of the “Voices of the Poor” projects of the World Bank\textsuperscript{12} show that after violent conflicts the highest priority of the population in fragile states is fundamental security and individual economic survival. The essential prerequisites to achieve this are employment and income.

Moreover, non-working (so-called "idle") youth pose a serious potential for conflict in fragile contexts. A survey for the World Development Report 2011 in selected fragile states shows that a lack of "peaceful" income possibilities is one of the main reasons for participation in rebel and criminal groups (see graph).

Employment in fragile contexts is however not only important as a source of income. World Bank analyses\textsuperscript{13} show that employment is closely tied to personal identity, trust in institutions and the willingness to engage in society. Accordingly, employment can positively influence social cohesion by strengthening the relationships between people, including those with different socio-economic or ethnic backgrounds. This is particularly important in fragile contexts where many people have lost their trust in social relationships due to experiences of violence.

**KfW approaches to promoting employment in fragile contexts**

The conflict-prone environment and lack of vital basis services in fragile states often require implementing fast-acting measures with direct effects on income. Capacities for swiftly absorbing workers exist primarily in the informal sector, particularly in agriculture. However, at the same time the growth of the formal sector is important in the long term for creating "good" jobs with higher labour standards and a minimum level of social protection.

Therefore, KfW promotes employment in fragile contexts through both multi-sectoral projects aimed at directly bringing stabilisation or developing peace, as well as through sectoral projects to improve the framework conditions for the private sector.14

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**Employment as means of stabilisation and contribution to develop peace**

In fragile contexts KfW finances multi-sectoral projects whose defined goal is the creation of income possibilities as a contribution to peace consolidation. These projects are designed to enable both material survival as well as peaceful coexistence. The income possibilities comprise informal and formal, self-employed and dependent, and short and long-term employment.

The projects support both the demand and supply side: on the demand side the creation of jobs is supported, while on the supply side the working population is made familiar with the labour market. In the process the projects also help provide the necessary social and economic infrastructure for the people and boost agricultural and handicraft production and local services. Both contribute to revitalising local economic cycles. This results in the following employment effects:

On the demand side **direct short-term employment** is created through the labour-intensive design of infrastructure measures (schools, hospitals, roads, markets etc) and the recultivation of agricultural lands (cash-for-work measures). These measures usually last approximately three to five months and in fragile contexts can help provide returnees with their first opportunities to earn money and allow them to gain work experience. The number of short-term jobs created depends directly on the available investment volume. For example the peace fund project in the Democratic Republic of Congo has thus far provided EUR 38 million to rehabilitate social and economic infrastructure and implement agricultural measures, thereby generating 2.4 million person days of short-term work. This equals about 20,000 short-term jobs based on an average employment period of four months. Approximately 20 % of the investment amount goes towards labour costs.

These short-term workers generate additional demand, e.g. for food, leading to **indirect short-term employment**. For example, in Sierra Leone it has been noted that every 100 directly created jobs lead indirectly to 5 to 10 additional jobs alone

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for food vendors.

**Direct long-term employment** arises from the operation of newly created infrastructure, such as for the administration of a new market or the teaching staff for new schools. The **indirect long-term employment effects** are much greater but are more difficult to measure. Additional cropland for agricultural production, rehabilitated roads, access to markets and other important market infrastructure (e.g. storage space or cattle paddocks) lead to opportunities to transition from subsistence farming to the marketing of agricultural products. This additional economic activity in turn creates incentives for the establishment of small and micro businesses. It has been shown that important newly created infrastructure, such as e.g. bus stations, acts as an income multiplier and generates numerous new jobs in the service sector (mechanics, storeman, salesperson etc).

**Microfinance in Sierra Leone**

In order to stimulate small and micro enterprises, KfW set up a fund in 2004 together with other international donor institutions designed to refinance and strengthen the capacities of microfinance institutions. Various newly founded microfinance institutions have received support through the fund. Currently there are more than 100,000 borrowers registered in Sierra Leone. The supported microfinance institutions are in a stronger position, both economically and institutionally.

On the supply side, in its multi-sectoral programmes KfW supports parallel measures for training of workers. Years of violent conflicts in fragile states often result in a lack of a well-qualified labour force. Either workers have left, not received training or lost the required abilities during the years of war ("forgetting by not doing"). Therefore measures are required which increase the employability and the entrepreneurship of the people. For example, KfW supports "on-the-job" trainings which take place during the construction phase, shortened vocational training measures (approx. 6 months) and particularly training in the planting and cultivation of cropland to increase the economic independence of smallholders. A shortened school education to make up for missed schooling can make sense if completing school was not possible during the years of war.

For all measures KfW makes sure to use opportunities for promoting social cohesion. For example, internally displaced people are employed in construction together with local workers. However these programmes must also not cause new conflicts. These could arise, for example, if the project does not meet workers' expectations for long-term employment.

**Promoting the overall conditions for employment in the private sector**

As a strong private sector is decisive over the long term for a high employment rate, KfW is also working on improving the framework conditions for the private sector in fragile contexts. In particular small and micro enterprises play a key role in creating long-term jobs. However these enterprises face enormous challenges in fragile contexts. According to a survey of enterprises in fragile states, some key business barriers include the lack of electricity (68%), lack of access to financial services (56%), corruption (48%) and poor transport (38%).

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Correspondingly KfW promotes larger infrastructure projects in key areas, such as the restoration of the electricity supply in Kabul, the construction of hydro-power plants in Nepal or main highways in Liberia through a multi-donor trust fund. Along with the indirect employment effects through improved framework conditions for enterprises, the recruitment of local workers for the construction of infrastructure leads to direct short-term employment as well as indirect employment due to increased demand.

In addition to infrastructure projects KfW is also often active in the financial sector in fragile contexts. The goal is to create stable and trustworthy financial institutions which grant loans that are fair and tailored to the needs of micro and small enterprises. Improving access to capital enables the poor to implement their business ideas or expand their business, thereby creating new income possibilities for themselves or even for employees.

Conclusion
Employment is the key factor for more stability in fragile contexts along with security. At the same time a stable environment is a prerequisite for strengthening the private sector, which is essential for creating jobs. Therefore in fragile contexts KfW addresses both aspects through its projects, thereby promoting both direct and indirect employment on a broad scale. However there is a need to systematically collect and analyse the employment effects. In particular indirect employment effects have thus far been difficult to quantify.

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II.4. Financial Sector Development, Microfinance and Employment

Author: Bianca Denfeld

The financial sector is significant for the creation and preservation of jobs in developing and industrialised countries. A financial system which functions well is one of the cornerstones of economic growth. Financial institutions mobilise resources for private and public investment and ensure that cashless payments can be processed quickly and safely.

The financial sector’s significance is particularly perceptible during crises. If the financial sector is unstable and does not provide adequate financing and if the framework conditions for investment and economic decisions are uncertain, this considerably restricts the real economy. The result is a lack of investment, low or no growth, unemployment and underemployment. The 1997 Asian crisis, the 1998 Russian crisis and the current financial and economic crisis show that weak and under-regulated financial systems trigger or intensify economic crises and can cause high unemployment and poverty.

The financial sector affects many sectors of the real economy from the promotion of small businesses to agricultural production, university education, cross-border economic infrastructure and direct foreign investment.

The German Development Cooperation is currently active in the financial sector in more than 400 projects and programmes in over 70 countries. Within this sector, the goals of the Development Cooperation are to improve access to financial services, close financing gaps and stabilise financial systems. As part of the Financial Cooperation, KfW Development Bank thus promotes the financial sector in many different ways. It supports local financial institutions in the financing of micro, small and medium-sized enterprises (MSMEs) and promotes environmental investments (e.g. in the fields of energy efficiency and renewable energies), housing, municipal investments, education and infrastructure – all with specific impacts on employment.

Below, we focus on improved access to finance for micro and small enterprises (microfinance). Financial services for this target group are diverse, and they can be promoted in very different ways. KfW covers a wide range.

Financing for micro and small enterprises

Microfinancing aims to provide people with access to loans, savings, insurance and efficient payments system (financial inclusion). Such financial services provide customers with greater financial security and allow them to realise their economic potential. With a 2.1 billion euro portfolio, KfW is one of the most important providers of microfinance.

Poor sectors of the population, including many women and micro-enterprises, can be provided with long-term access to financial services through the development of local financial institutions which offer small loans, saving schemes, transfer facilities and small-scale insurance policies.

It would seem reasonable to assume that such access makes a positive contribution to employment in both the financial institutions which receive support as well as at final borrower level. In surveys, micro and small enterprises repeatedly
name limited access to financial services as their greatest hindrance to growth. Nevertheless, research into the significance of micro and small enterprises for employment in developing countries is still in its infancy.

Employment in financial institutions (predominantly local microfinance institutions, commercial banks and funds) and at borrower level (in many business areas and sectors) triggered by promotion measures is regarded here as *direct employment*, whilst all of the suppliers of the borrowing small businesses and stakeholders in the downstream value chain benefit from an *impact on indirect employment*.

**Enterprise types and their potential**

Micro and small enterprises in developing countries can be divided into various types of enterprise:

- **Subsistence enterprises**, founded by an entrepreneur to safeguard his or her own livelihood (self-employment). Usually these entrepreneurs have few alternatives, so it is essentially a question of social security for the poor. In the majority of cases, these are enterprises in the informal sector, frequently with a seamless transition to private households. These households survive through various activities including micro-entrepreneurialism, day work and sometimes money sent home from family members working abroad (remittances).

- **Transformation enterprises**, where the entrepreneurs strive for more than subsistence and manage their enterprise with a view to growth and creating additional jobs within that enterprise (third-party employment). The entrepreneurs are more dynamic self-employed people whose enterprises tend to develop into businesses with a relatively steady course of growth.

Some researchers (e.g. Lena Giesbert) distinguish another group of informal enterprises: "*constrained gazelles*". These enterprises have the potential for growth (although whether they are as agile as gazelles is open to conjecture), achieve high yields from a low capital investment and have an entrepreneurial approach. But they encounter numerous barriers, frequently in the form of restricted access to capital and especially to loans. Research results from West Africa, Sri Lanka, India, Mexico and other countries document this type of informal entrepreneur.

The target group and customers (borrowers) of microfinance are frequently informal entrepreneurs including a large number of women. Predominantly, they are subsistence entrepreneurs, i.e. self-employed.

Most microcredits are requested by customers in order to maintain an existing business (working capital loans, substitute investments) or to expand an existing enterprise. Such enterprises are normally founded with personal funds -- often from the family -- but might also be funded by microcredits.

Subsistence enterprises in the informal sector rarely generate new jobs. Even

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*Bringing in a great harvest after a little kick-start.*

Source: ProCredit Moldova
successful, self-employed micro-entrepreneurs only sometimes develop into small or medium-sized enterprises which create jobs (graduation). It is estimated that 10-20% of microfinance customers develop into small businesses through such graduation processes and eventually offer employment to third parties, i.e. employ people who are not family members. Assessments here differ. Figures fluctuate between "just 10%" and "considerable 10-20%!"

However, the decisive forces when it comes to the creation of jobs for dependent employees do seem to come more from the sector of innovative small and medium-sized enterprises and the large-scale enterprise sector, i.e. the formal sector. There are many indicators of this.

**Why promote financing in the informal sector?**

Informal enterprises are far more numerous in developing countries than formal enterprises. Especially in sub-Saharan Africa, the majority of employment is in informal enterprises. Enterprises in the informal sector are those which most require access to adequate financing options. Events as children starting school, marriage, death and old age, crop failures and accidents/illness lead to particular financial needs. Loans and financial services responding to these needs probably have a low impact on employment, yet they have extremely positive development impacts because they can offset income fluctuations of the poor and consequently tangibly improve their standard of living. The line between the consumptive and investive use of loans is often fluid from the perspective of poor households. For example, paying a bill for medicine by means of a microcredit so that a worker can quickly get back to work might be a vital and legitimate course of action, since it will prevent an extended period of illness and a slide into poverty. The maintenance of existing jobs and thus the prevention of a descent into greater poverty is also an important goal which contributes to social security.

As microfinance is about more than safeguarding employment, choosing potentially successful micro-enterprises with the potential to create jobs is often not the primary concern when local financial institutions grant loans.

Microfinance does, however, stimulate the entrepreneurial activity of borrowers. This has been proven in individual studies for developing countries. Induced activity consisted of business expansion (e.g. stocking up warehouses, Banerjee et al. 2009) and the formation of small businesses as an additional source of income for families.

Regardless of the debate on self-employment versus third-party employment, the individual life cycle approach can also be used with regard to the increase in employment. Education financing and the building up of reserves through savings accounts play a decisive role before people reach working age. The development of reserves can be used to finance education and training later on. Security and a reduction in risks thanks to insurance policies are important for people of working age. These measures protect / preserve the workforce. Micro pension schemes allow individuals to make the years which follow their working life financially secure.

In the light of information on access to financing for micro-enterprises and lack of financing as a hindrance to growth, microfinance in developing countries is a promising approach to the promotion of employment.
Agriculture – a special sector for microfinance

Various types of agricultural investment can significantly increase the income of farmers in developing countries since their agricultural technology level is extremely low, especially in the case of small-scale farmers. Even simple investments can yield really high returns, which allow farmers to pay commercial interest rates for loans from the financial markets of developing countries.

Microfinance institutions are particularly suitable for this economic sector, since with efficient organisation and credit analysis methods for informal enterprises (no proper accounting system, balance sheets or traditional collateral are requested), they can also reach small agricultural businesses and evaluate them as borrowers. Working capital financing is important in addition to investment financing. The development of rural areas is encouraged through modern communications technology (branchless banking). To a certain extent, this can considerably reduce the costs of access to financial services for both financial institutions and users.

KfW promotion in the field of microfinance

KfW’s main approach to promotion in the field of microfinance is to strengthen local financial institutions so that they are able to offer sustainable financial services to micro and small enterprises. This is achieved through an improvement in liquidity and improvement of the financial institution’s financing instruments. KfW thus helps to establish and refinance microfinance institutions, develop the approach of local financial institutions to enterprise promotion, develop the networks and holdings of these institutions and form regional or global funds which promote all of these measures. A solid and successful example here is KfW’s equity investment in international microfinance networks and banks.

Example project: ProCredit Group

The ProCredit Group runs ProCredit banks in 21 countries. It is a public-private partnership which aims to promote access by micro and small enterprises and other disadvantaged customer target groups to financial services. ProCredit Group has become the leading financial services provider in numerous developing and transformation countries:

› ProCredit Bank’s network of branches service 2.9 million customers, many of them in poorly developed, rural regions.

› Its core business relates to microcredits and, increasingly, agricultural loans. Its loan portfolio has grown from 390 million euros (2003) to 4.2 billion euros (end of June 2012). 76% of loans are less than 10,000 euros; around 93% are less than 30,000 euros. In the last three years, more medium-sized loans with longer terms have been approved and paid out to increasingly finance investment in addition to trade financing.

› ProCredit banks make a significant contribution to mobilising savings in partner countries. With more than 3.6 million savings accounts worldwide, it offers its customers a safe way to save money. More than 3.5 billion euros are currently invested in ProCredit savings accounts.

Since the mid-1990s, the ProCredit Group has been supported by KfW Devel-

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16 There are currently ProCredit banks in the following countries: Democratic Republic of Congo, Ghana, Mozambique, Bolivia, Columbia, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Albania, Bosnia and Herzegovina, Bulgaria, Georgia, Kosovo, Macedonia, Moldova, Romania, Serbia and Ukraine.
opment Bank on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). At present, KfW holds an equity investment\(^\text{17}\) of 46.7 million euros in the parent company ProCredit Holding. KfW also helps individual ProCredit banks to expand their range of loans to micro and small enterprises through long-term refinancing and training measures. KfW and the ProCredit Group also collaborate successfully on financing energy efficiency.

There is a direct impact on employment at financial institution level in the form of the 16,000 ProCredit Bank employees worldwide. More than 90% of these are local employees, many of them in management and senior management positions. The holding company's annual report details the entrepreneurial development of individual micro-enterprises which have grown through ProCredit financing, including Cosméticos Tokalán in Bolivia, which manufactures and markets cosmetics, and entrepreneur Cecilia Balsecai in Ecuador, who successfully produces and sells ecologically friendly bags. Both enterprises have succeeded in creating jobs.

**Topics for further research**

As yet, there has been little investigation into the growth opportunities of micro-enterprises, and there is an absence of meaningful data for most countries in which KfW promotes microfinancing. Amongst other winners, the KfW Research Prize 2012 was awarded to researchers who investigated the subject of informal micro-entrepreneurs and discovered that many of them have an amazingly high productive potential which, however, requires targeted development in order to be realised. In our opinion, research issues with a particular practical significance include the following:

- The growth of enterprises in the informal sector, including small-scale agriculture, and their contribution to the creation and preservation of jobs.
- General and sector-specific criteria for the selection of young and innovative enterprises with the potential to create new jobs.
- The impact on the costs and processes of microfinance institutions if borrower selection is less geared to borrowing capacity than to growth potential.
- Criteria for "good jobs" in the informal sector.
- The economical measurement of indirect impact on employment.

**Conclusion: microfinance creates specific employment**

Microfinance customers are generally independent micro-entrepreneurs creating their own employment. The special potential of microfinance therefore lies in supporting subsistence entrepreneurship to job seekers who are largely without other opportunity. This takes place in countries where social security networks

\(^{17}\) KfW's investment with its own funds and at KfW's Banking Group's own risk.
are frequently non-existent or inaccessible.

However, it is not realistic to expect that the microfinance approach might trigger a wide entrepreneurial movement where flourishing small and medium-sized enterprises which create jobs emerge from a pile of sole traders.

If there is to be a greater focus on impact on employment in addition to the numerous other positive effects of microfinancing, support would have to be geared more specifically to those young and innovative enterprises which actually create jobs. Amongst other things, financial institutions such as the ProCredit Group promoted by the Financial Cooperation of KfW show how this is effectively and cost-efficiently possible with the existing microfinance institutions and their lending technologies in the context of microfinance. These financing institutions have expanded their field of promotion through the addition of financial services for small and medium-sized enterprises in the formal sector (financial broadening), thus continuing to offer their micro-customers support when they grow, especially during the decisive stage when they change from an informal to a formal enterprise.

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II.5. Good Governance, Qualitative Growth, Employment

Authors: Jonas Blume, Klaus Veigel

“Good governance and sustainable development are indivisible. That is the lesson of all our efforts and experiences, from Africa to Asia to Latin America. Without good governance […] no amount of funding, no amount of charity will set us on the path to prosperity.” — Kofi Annan

Good governance – a key prerequisite for qualitative growth

Sustainable economic, ecological and social development is not only defined by economic growth but also manifests itself through an increase in distributive justice, improvement in equal opportunities and social security, peaceful coexistence and the preservation of natural resources.

Experience gathered in our partner countries shows that efficient state institutions are an important prerequisite for the achievement of these development policy goals. This is why the German Federal Ministry for Economic Cooperation and Development (BMZ) places a very high priority on the promotion of good governance.

What do we mean by good governance?

The German Federal Ministry for Economic Cooperation and Development (BMZ) has established the following good governance principles:

- Poverty-orientation and sustainable policy
- Observance, protection and guarantee of all human rights
- Democracy and the rule of law
- Government efficiency and transparency
- Cooperative behaviour in the international community of states


Promotion of good governance by KfW

KfW promotes good governance as a cross-sectoral issue and via projects in the fields of (1) decentralisation and good local governance, (2) budget support for the implementation of national development strategies and (3) the strengthening of public financial management and public administration.

Decentralisation reforms focus on the transfer of duties, political decision-making powers and financial resources from the central government to middle (provincial) or lower levels of government (e.g. towns and municipalities). This brings the state closer to the citizens and makes governmental action more geared to the needs of the population. KfW supports such reforms through the establishment or financing of national transfer systems, the strengthening of the financial foundations of communities, the promotion of the local economic infrastructure, and the establishment of local administrative institutions, among others.
Budget support is a tool which assists reform-orientated governments in selected partner countries in the implementation of their national development strategies. On the one hand, budget support works via financial incentives: payments are made directly to the partner country’s budget once jointly agreed objectives have been achieved. On the other hand, KfW supplements budget support with specialist technical support such as taking part in national task forces and investing in public financial management.

A working public financial system is essential for successful development in all sectors. It is impossible for development strategies to be effectively implemented without reliable budgeting and the proper use of public funds. KfW actively supports public financial management so that government expenditure is deployed more transparently, efficiently and effectively in our partner countries and so that improved tax collection can generate additional funds for development purposes.

Direct effects
Both projects which support decentralisation reforms and budget support expand the financial scope of local and national authorities, making a direct and immediate contribution to qualitative growth and job creation.

As part of budget support, this takes place through the financing of the implementation of national growth and poverty reduction strategies in the partner countries. Many countries which receive budget support have made impressive progress towards achieving the Millennium Development Goal (MDG) through an increase in social expenditure. In Rwanda, for example, maternal mortality has decreased by 35% in the last five years, child mortality has almost halved, and the proportion of poor people has fallen from 57% to 45%. 1.2 million people were thus able to escape poverty.

As for decentralisation projects, they generally finance priority local infrastructure (e.g. markets, schools and medical centres) which are constructed – frequently in high labour intensive (HIIMO) way – by local building firms and subsequently maintained and operated by local specialists. A secondary effect of this infrastructure is often the creation of other business opportunities and jobs, e.g. when, as part of decentralisation projects, rural roads are built and markets are established to allow the local population to sell their produce and thus earn income.

Indirect effects
As well as having a direct positive impact on qualitative growth and employment by creating an enhanced scope for financing, governance projects have a long-term impact since they improve the economic and political framework. Examples here include the strengthening of the public financial system and the improvement of the ability of the municipalities to plan and implement infrastructure projects.
There is now sound scientific proof of the long-term contribution of governance projects to qualitative growth in partner countries. Studies show that countries which receive budget support from Germany direct more of their budget towards the national development strategy. The European Commission confirms that countries with a high proportion of budget support have made much more progress in the Human Development Index and in MDGs which can be directly influenced by the government (e.g. education). An analysis by the World Bank found that poverty is reduced much more quickly in countries which receive budget support.\(^{18}\)

Budget support also helps to improve the framework conditions for private investment and thus promotes qualitative and quantitative growth. In many cases, an improvement in the investment climate forms an important component of the performance targets agreed by the providers of budget support and the recipient and forms part of the political dialogue associated with budget support. Budget support thus motivates governments to improve the investment climate, thereby creating jobs and a competitive economy. For example, as part of budget support to Ghana, it was agreed that the administrative procedures for setting up and registering businesses would be simplified. The goal of making the import and export of goods easier was also set. The results of the Ghanaian government's efforts are clearly evident: according to the Doing Business indicators of the World Bank, the time required for the cross-border trading of goods has halved since 2006. During the same period, the number of procedures required in order to register a business has fallen from 11 to 7 and the costs associated with setting up a business have been significantly reduced.

Many of the effects described can be explained by greater accountability on the part of political decision-makers. This promotes a greater focus on results when the national budget is approved and implemented. Greater transparency in the budgetary process and increased integration of parliament, the media and civil society have contributed to this.

### Fighting corruption and encouraging qualitative growth and more employment

Corruption is one of the biggest obstacles of all when it comes to qualitative growth and productive employment. As well as being a direct waste of resources, the long-term influence of corruption on the economic development of a country is even more serious. Corruption scares off investors and leads to misallocation of resources. According to Transparency International, developing and emerging countries incur losses of between 20 and 40 billion US dollars each year as a result.

For this reason, the German Federal Government places a high priority on the fight against corruption.\(^*\) Budget Support is a particularly useful tool for promoting anti-corruption strategies in partner countries. This type of promotion can take the form of the setting of performance criteria for the awarding of budget support or accompanying support for independent supervisory institutions such as national audit courts.

\(^*\) Federal Ministry for Economic Cooperation and Development (2012), *Anti-corruption and integrity in German development policy*, BMZ Strateav Paper 4/2012

Positive effects with regard to sustainable growth, the reduction of income inequality and the achievement of MDGs can also be seen in the field of decentralisation (Veigel, 2012). As with budget support, accountability plays a major role. In the long term, local accountability (and especially participation at local level) is vital, since it ensures that policy is geared to the needs of the population. In the short term, however, the countries which show the best results are those which have pronounced top-down accountability, i.e. where the municipalities receive adequate supervision and support from the central government or independent institutions.19

Summary
Through its governance projects, KfW supports its partners in a long-term process of change with the goal of good governance. These projects directly create jobs, e.g. as a result of the implementation of the national development strategy and the development and operation of local infrastructure. The long-term effects are more important, however, since efficient local and national administrative structures which fulfil their duty of accountability to the people improve government services, reduce corruption and thus sustainably improve the investment climate.

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19 K. Veigel (2012), "Decentralization Matters for the Poor", KfW Discussion Paper
II.6. Growth, Employment and Climate Protection – Irreconcilable?

Authors: Sebastian Hach, Dr Jochen Harnisch

Climate protection and qualitative growth

In order to effectively protect the climate and limit global warming to 2°C, it is important to also include emerging and developing economies in the climate protection efforts. This is the context in which climate protection projects aim to not only reduce greenhouse gas emissions in absolute terms but to increasingly contribute to placing the economic systems in developing and industrialising countries on a generally more environment and climate friendly basis (also an element of the “green growth” and “green economy” approaches). In this way, development and economic growth on the one hand and rising greenhouse gas emissions on the other are to be more strongly dissociated in the future, and ambitious climate protection is to be achieved as an important element of sustainable development (see box “Sustainability and qualitative growth”). In this context it will be necessary above all to explore and identify the positive secondary effects of climate protection projects in the specific partner context and to support them as important partial objectives in the implementation of projects with, among others, appropriate complementary measures and financing instruments.

In promoting sustainable development, KfW (business area development finance) supports growth and economic activity that respects the climate and the environment, and helps to demonstrate that experience and approaches tried and tested in Germany can be applied as elements of a sustainable growth path outside Germany as well (see box "Energy turnaround and green technology in Germany").

Accordingly, more than 60 % of KfW's commitments, or around EUR 2.7 billion, have a relevance to the climate and environment (as at the end of 2011).

### Sustainability and qualitative growth

**Sustainability** has been an important objective of KfW's work for many years, and it is essential to its promotional mandate. In KfW's understanding, sustainability comprises ecologically sound, socially just and economically efficient development that improves the living conditions of the people and creates future prospects also for coming generations in Germany as well as in the developing and industrialising countries. An important topic in this context is climate and environmental protection.

**Qualitative growth** designates a development process aimed at achieving sustainable progress. Qualitative growth means increasing the prosperity of society as a whole, which is also expressed in improved distributional justice, equal opportunities, social protection, peaceful coexistence and the preservation of the environment.

The expressions “sustainable development” and “sustainable growth” consider that the concepts of sustainability and quality growth pursue similar intentions.

### Climate-friendly growth and employment

In the context of climate protection as a crucial element of sustainable develop-
ment and qualitative growth, the concept of green jobs is increasingly being used in analogy to the concepts of green growth and green economy.

Employment as one of the most important effects of growth can be achieved in two ways. In particular, climate protection projects can have positive secondary effects in the form of direct short and medium-term employment effects (e.g. for the sustainable management of forests or the construction and operation of facilities that generate electricity from renewable energies).

Besides direct employment effects, however, sustainable growth can also generate indirect, long-term employment effects. These occur particularly when structural effects emerge in the job market of a partner country as a result of transformations in industrial processes.

This can be the case, for example, when environmental technology enterprises are established, the necessary preconditions for qualifications and training are created and the economy as a whole increasingly adapts to sustainable practices. A familiar example is the renewable energies sector. Another is the transport sector because it helps create corresponding development and growth opportunities which, in turn, can have employment effects.

Although the sustainable growth concept usually places an emphasis on projects in the area of climate protection, projects in climate change adaptation can also have employment effects in the sense that they can safeguard existing sources of income and employment. For example, measures such as irrigation projects in regions particularly affected by climate change can help to sustainably secure employment in agriculture which would otherwise be threatened in the near term by the consequences of advancing climate change.

In connection with employment effects generated by sustainable growth, the focus is often on aspects such as export opportunities and leadership in innovative technologies. In this context, Germany, which in recent years has created considerable employment in environmental technology enterprises and considers this high-technology sector an important element of future economic growth, can indeed be mentioned as a positive example. (See box "Energy turnaround and green technology in Germany"). Accordingly, the effects of the energy turnaround, among others, will also be assessed from this perspective.

However, in analysing employment effects it must generally be taken into account to what extent existing jobs are replaced and new jobs are actually created. For example, when renewable energy systems are constructed, new employment will be created only if the same number of jobs are not lost at the same time by substituting fossil fuel-based generation capacity.

Particularly in the fast-growing emerging and developing economies there is considerable potential for designing necessary extensive new energy infrastructure investment in such a way that it contributes to climate and
environment-friendly development. Then, if employment is created in environmental technology enterprises in particular, this can contribute at the same time to establishing climate and environmental protection practices sustainably in the partner country's economic structure. Overall, employment effects are a crucial element in the transition towards and acceptance of more sustainable economic practices.

**Energy turnaround and green technology in Germany**

Under the concept of the "energy turnaround", Germany is pushing ahead the gradual conversion of its energy supply on a sustainable and climate-friendly basis. The experience so far gathered in this regard may also be transferable at least in part to the development in industrialising and developing countries. According to the "Environmental Technology Atlas for Germany" published by the Federal Ministry for the Environment, "environmental technologies are among the most important future markets of the 21st-century. They ensure that environmental burdens are avoided from the outset or reduced, or that damage already caused is repaired. At the same time, their use supports enterprises in conducting their business efficiently and remaining competitive with scarce and increasingly more costly raw materials. Cost reduction potential can be tapped for enterprises in this area especially now, but also in the future. The Environmental Technology Atlas "Green Tech Made in Germany" has shown that environmental technologies and environmental innovations are important economic factors in Germany and that they have increasingly evolved into a motor for growth and employment. The global financial and economic crisis has done nothing to change this – the long-term trends remain stable.

**Assessment from the perspective of climate policy**

In general, the sustainable growth approach is suitable for supporting climate protection efforts in emerging and developing countries if the particular characteristics and priorities of a country are taken into account and integrated into the country's own sustainable growth path. Pursuing this approach can also provide impetus for negotiations on a globally binding climate protection agreement that will include emerging and developing countries and will be necessary to reduce global warming to a sustainable level beyond voluntary climate protection commitments.

Despite the generally interesting elements of the sustainable growth concept, a variety of obstacles hamper its implementation. Thus, a considerable part of the positive effects presented here, such as employment increases, must be considered rather as a long-term incentive.

What is problematic is that precisely countries with widespread poverty act or are forced to act in a more short-term manner and that, as a result, the idea of sustainable growth often provides what is at least initially only a limited incentive for investment in environmental and climate protection. Therefore, the concept tends to be more easily applicable to the more advanced industrialising countries, although in these countries as well the question must be asked to what extent the long-term positive
effect to be achieved, such as employment increases, can offset the expected additional short-term costs and to what extent measures taken to bring about a transition to climate-friendly growth turn out to be economically attractive investments in the medium term.

In order to help achieve climate-friendly development in emerging and developing countries and more strongly separate greenhouse gas emissions and resource consumption from economic growth, considerable additional costs will (therefore) initially have to be incurred. Consequently, development cooperation in environmental and climate protection must play the important role of financing part of this initial additional cost of sustainable development. To achieve this, however, it will be necessary to considerably increase financing amounts if projects are also intended to achieve transformative impacts in the meaning of a sustainable growth concept that goes beyond the immediate confines of the project. Also, long-term indirect employment effects that are particularly important for the sustainable transformation of the economic system will only come about, for example, if the industrial sector adapts to the changed requirements to a relevant degree. However, this can only be expected to occur if instead of scattered environmental and climate protection investments large volumes of finance are made available to provide appropriate clear signals and investment incentives.

Another fundamental challenge is that transformative effects and, in particular, the employment effects produced by investment in environmental technology sectors have to be clearly evidenced. This would have to take into account, for example, the effects of the investments on other industrial sectors as well as the opportunity costs of an alternative use of the funds. Any existing fuzziness in the definition of which areas of employment can be classified as environment-friendly should be clarified jointly between the donors and the recipient.

Conclusion
Climate-relevant projects and programmes can achieve positive growth and employment effects if the necessary preconditions are met, in particular in the areas of economic policy and education/qualifications (e.g. workers qualified in the use of the relevant technology). Initially, there will be additional costs in the short and medium term that should not hamper the financing of poverty reduction and development but should be covered by donor countries with funds that are proven to be additional.

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II.7. Impact of Health Projects on Employment

Author: Christine Greve

The global significance of healthcare for the economy and labour market
In most countries, healthcare represents a considerable growth factor for the economy. In 2009, 5.97 trillion US dollars (900 US dollars per person) were spent on healthcare throughout the world. On average, African countries spent 6.5 percent of their gross domestic product (GDP) on health, which corresponds to 83 US dollars per person. The South-East Asian countries spent an average of 3.7 percent of GDP or 48 US dollars per person (World Health Organization/WHO, Global Health Expenditure Atlas, 2012). According to WHO estimates from 2006, 60 million full-time paid employees work in healthcare, two thirds of who are direct healthcare providers (doctors, nurses, midwives, pharmacists etc.). The remaining one third works in support roles (managers, administrative personnel, ambulance drivers etc.). If we include workers who are indirectly employed in healthcare (e.g. in the insurance sector and associations), estimates rise to 100 million employees worldwide.

Typically, 70 percent of all doctors are male and 70 percent of all nurses and carers are female. This is an extreme imbalance which, as a rule, is more prominent in developing countries than in industrialised nations. Globally, around two thirds of all service providers work in public healthcare and one third in the private sector (WHO, World Health Report "Working together for health", 2006).

A stabilising factor in times of crisis
As a labour market, the field of healthcare is not particularly sensitive to the economy. Instead, it is a stabilising element. This has been apparent during the latest financial crisis, when global employment figures have dropped drastically in many sectors whilst demand for healthcare personnel has increased constantly. The rise in employment in the health industry is surpassed in most developing countries only by the real estate sector and the building industry (ILO, Key Indicators of the Labour Market -KILM, 7th Edition, 2011).

Main problem: the lack of qualified workers
For years, global unemployment figures in the healthcare industry have been low. However, numerous countries are suffering from a lack of qualified medical workers. In developing countries, this is usually due to insufficient financial resources for the education and training of nurses, doctors, midwives and other medical specialists. Now that an acute shortage of healthcare personnel has become evident in industrialised nations, too, developing countries are also faced with the increasing migration of qualified workers who are attracted or actively recruited by industrialised nations with better earning opportunities and working conditions.

In many countries, this brain drain has catastrophic consequences. In Africa, for example, the ratio of qualified medical staff to inhabitants is 2.3 to 1,000 compared to 18.9 to 1,000 in Europe. Whilst Africa has to bear 24 percent of the global burden of disease, just three percent of the world's healthcare personnel work there. It is estimated that by 2015 the continent will have a shortage of
420,000 doctors (see Table 1 for figures on overall numbers of medical personnel).

The shortage of qualified workers is particularly serious in rural areas. Accommodation and transport problems resulting in the migration of personnel are often added to the poor working conditions. In many regions, specialist workers with little training (known as community health workers, feldshers or promotores de salud depending on the region) and traditional midwives play an important role in providing medical services for the rural population.

Table 1: Estimated critical deficit of doctors, nurses and midwives (by WHO Region)

<table>
<thead>
<tr>
<th>WHO-Region</th>
<th>Number of Countries</th>
<th>Deficit of Qualified Workers within States</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Countries with Medical Specialist Deficit</td>
<td>Total Pool of Medical Specialists</td>
<td>Estimated Deficit of Medical Specialists</td>
<td>Required Increase as Percentage</td>
</tr>
<tr>
<td>Africa</td>
<td>46</td>
<td>36</td>
<td>590,198</td>
<td>817,992</td>
<td>139</td>
</tr>
<tr>
<td>North and South America</td>
<td>35</td>
<td>5</td>
<td>93,886</td>
<td>37,886</td>
<td>40</td>
</tr>
<tr>
<td>South-East Asia</td>
<td>11</td>
<td>6</td>
<td>2,332,054</td>
<td>1,164,001</td>
<td>50</td>
</tr>
<tr>
<td>Europe</td>
<td>52</td>
<td>0</td>
<td>No details</td>
<td>No details</td>
<td>No details</td>
</tr>
<tr>
<td>Eastern Mediterranean</td>
<td>21</td>
<td>7</td>
<td>321,613</td>
<td>306,031</td>
<td>98</td>
</tr>
<tr>
<td>Western Pacific Area</td>
<td>27</td>
<td>3</td>
<td>27,260</td>
<td>32,560</td>
<td>119</td>
</tr>
<tr>
<td>In Total</td>
<td>192</td>
<td>57</td>
<td>3,355,728</td>
<td>2,358,470</td>
<td>70</td>
</tr>
</tbody>
</table>

Source: WHO, 2006

Precarious working conditions

In most developing countries, public healthcare is characterised by a heavy workload, poor working conditions, low job security and proportionally low pay (especially for nurses and auxiliary personnel). The sector has one of the highest risks of illness in the workplace and absence from work. In many developing countries, healthcare workers are more affected than normal by violence and sex attacks at work. Added to this, the risk of infection — above all in sub-Saharan Africa — is considerable due to poor hygiene standards and a high proportion of HIV/AIDS patients in healthcare facilities. It is first and foremost women, who constitute the majority of people employed in healthcare (in some countries up to 80 percent of the total sector workforce), who are affected by these difficult working conditions.

The role of the private sector

In many developing countries, the private sector plays an increasingly important role as a provider of healthcare services and thus also as an employer. It generally offers better working conditions and better pay than public healthcare but in many countries it is subject to worse regulation. 30% of all doctors and more than 50% of all other health service providers in medium- and low-income countries are employed in the private sector (WHO, 2006). Also, the number of doctors who work in public healthcare and supplement their income with second, private jobs should not be underestimated.
More money for health – a curse or a blessing?
The issue of whether increasing funds for healthcare projects in developing countries has a positive impact on the employment situation in those countries is controversial. Proponents cite the great unmet need for qualified workers, which can only be satisfied through more expenditure on education and training and better working conditions and earning opportunities. They say that as long as international Development Cooperation (DC) work takes this into account, it has an important key to improving the employment situation.

Sceptics, on the other hand, remind us that prioritising the social sectors in the course of focusing on the Millennium Development Goals (MDG) will lead to a disproportionate amount of budget funds being allocated to the health and education sectors in many developing countries – at the expense of the manufacturing sectors and infrastructure projects. Whole professional branches would die out and qualified specialists from other sectors would emigrate. The result would be a service-based economy which – especially in countries with low population figures and low tax revenues – would not be in a position to generate sufficient state revenues or finance the import of required manufactured goods.

This argument, however, suppresses a second important aspect of employment promotion in the social sectors. Instead of regarding expenditure on personnel in the health and education sectors solely as a burden on the state budget as finance ministers in developing countries tend to do, an increase in numbers in employment in healthcare should also be seen as an important investment in the promotion of the health of the workforce in general (cf. the position paper on health and qualitative growth).

The impact of FC support on employment in the health sector
The division of labour between the German Financial Cooperation (FC) and Technical Cooperation (TC) is such that the TC is generally responsible for programmes directly relevant to employment in the health sector (e.g. education and training). Yet FC involvement in the health sector has a series of direct and indirect effects on employment.

Strengthening health systems
As part of its involvement in strengthening healthcare systems, the FC also includes the topic of the employment situation in sector dialogue with partner countries. Due to the high significance of good human resources management for the efficiency and effectiveness of healthcare investments, quantitative availability, training levels, pay levels and the motivation of qualified medical personnel play an important role in the assessment of a partner country’s sector policy. For example, solutions to the following issues are sought during dialogue with the partner country, in cooperation with the TC: What proportion of the budget should be spent on wages, salaries and allowances? How can the education and training of qualified workers be improved? What professional standards must be put into place and how can they be monitored? What incentives can increase the motivation of service providers and counteract the migration of doctors from rural areas?
Competition creates incentives for more and better employment

The topic of the qualification of specialist workers has long played an important role in approaches to projects and programmes. The majority of FC-financed infrastructure measures include a personnel training component. The financed projects only demonstrate their worth through the expert use of laboratory equipment and operating theatres, qualified administration of medicines and skilled provision of appropriate advice and information to patients.

The case study from Kenya (see box below) shows that the application of the principle of competition to the development of service providers can have a positive effect on employment figures, professional standards, working conditions and wage levels in both the private and public sectors. Attractive working conditions, job security and appropriate pay levels can make a decisive contribution to preventing the migration of qualified workers and counteracting the lack of personnel in developing countries.

In the Project "Support to Aga Khan University’s Health Programmes" in coordination with the East African Community, the training of midwives and nurses is even the central programme goal of the FC’s support via the development of the education infrastructure and the financing of education and training.

Promoting good working conditions

An important direct effect of FC involvement in the health sector is the improvement of working conditions in the sector. In the government-provided health service in particular, ramshackle wards and a lack of laboratory equipment and essential medicines often make the work of health service providers practically impossible. An improvement in the infrastructure and supply of medicines has tangible, positive effects on the motivation and ability to act of employees.

Efficient use of skilled workers

In the health sector, the FC is heavily engaged in the promotion of sexual and reproductive health and rights (SRHR). Here, it abides by the principle of promoting family planning and mother-and-child health services and the prevention of sexually transmitted diseases as part of a single concept rather than as separate, specialist services. In view of the lack of qualified workers in many developing countries, these integrated services are an effective approach to efficiently deploying medical personnel, improving their levels of training, increasing their motivation and making them into a flexible resource.

Positive effects for the employment situation in other sectors

Health promotion also results in important, indirect positive effects for employees in other sectors and for the advancement of employment in rural areas and
amongst women.

In addition to benefits enjoyed by the local and regional construction sector, health investment in developing countries gives rise to significant positive effects for important employers such as numerous suppliers, producers of technical medical equipment and the global pharmaceutical industry.

Good health provision – above all in rural areas – is an important prerequisite for the locating of trade in a specific region and the counteraction of migration to the cities.

Case study – competition improves the personnel situation in public and private health institutions in Kenya

For decades, Germany has supported Kenya in its efforts to improve the sexual and reproductive health and rights (SRHR) of its people. The financing of infrastructure, contraceptives and consumables via the state healthcare system proved to be inefficient and not particularly demand-oriented, especially since healthcare providers were not offered incentives for providing their patients with the best possible care.

In 2004, the Kenyan government therefore agreed to a pilot programme intended to avoid many of the structural weaknesses of supply-oriented health financing. As part of this output-based aid (OBA) programme, it has been possible since 2006 for disadvantaged women in particular to obtain heavily subsidised healthcare vouchers, which give them access to certain SRHR services in accredited institutions. The doctor who treats them is paid by the voucher agency (a kind of clearing centre for doctors working for the service) upon proof of services rendered. The provider can decide upon the usage of income earned in this way. As the patient can freely choose the provider, competition for patients develops amongst the accredited public and private health institutions. This leads to investment where patients want to see it. Numerous examples show that these investments also benefit medical personnel.

The Provide International Centre in Nairobi’s poor quarter, Korogocho, has appointed five new employees since it joined the voucher scheme in 2008. Public institutions, too, have for the first time been able to independently appoint new employees as required for the duration of the scheme. In addition to a series of investments in medical equipment and the equipping of the labour ward, the Lumumba Health Clinic in Kisumu has also installed a kitchenette for employees – a small investment which might have a major impact on the morale of workers faced with long shifts without a break. As well as more nurses, the manager of a private clinic in Korogocho has recruited two locums who regularly help out in the clinic. A computer with Internet access has also been purchased so that employees have access to the latest information and trends in their medical specialism.

These examples show that the right incentives and a certain amount of financial leeway are required to enable healthcare providers to create jobs and improve the working conditions of employees. Through education and training measures and by monitoring work standards, the programme contributes to an improvement in the employment situation in the participating institutions.

In the field of HIV/AIDS in particular, health information and services are frequently directed at occupational groups which, due to their jobs (long-distance drivers, soldiers, sex-workers and migratory workers), are at especially high risk of being infected with a sexually transmitted disease. Workplace programmes
which provide the workforce with information and destigmatise the subject of HIV/AIDS as well as the availability of condoms and voluntary HIV tests improve the working environment and reduce the risk of behaviour- and job-related disease.

Sex education and improved access to family planning services lead to women in developing countries having fewer children, thus giving them the opportunity to engage in productive employment. Together with the improvement of educational opportunities for women, the promotion of mother-child health is therefore a basic prerequisite for the better integration of women into the official labour market.

Furthermore, it has been proven that a reduction in childhood illnesses stabilises children's school attendance and improves their chances of access to employment.

Prospects for the increased promotion of employment in the health sector

The appropriate consideration of the promotion of employment is an important factor for the success of international cooperation in the health sector in view of the grave lack of qualified workers in the sector. Another aim is to increase awareness in Germany of the fact that poaching specialists trained abroad further heightens the crisis in the health sector of the country of origin. If these trends are not counteracted by means of a suitable agreement on the exchange of specialists or via compensation arrangements, the Development Cooperation will not be able to effectively combat the problem of the lack of specialist workers in the sector. Instead, the migration of health personnel could become an increasing risk to the success of FC and TC projects.

The FC can address this problem and provide positive impetuses for employment in the sector through a range of approaches.

1. As part of its contribution to the promotion of the health system, the FC must pay due attention to the different dimensions of effective healthcare provision. Fair access, quality assurance, the supply of qualified workers and health financing are four important topics to which the FC must devote its attention in both its approaches to programmes and sector financing. The fighting of individual diseases carries a risk of tying up scarce personnel resources, which are lacking in another area, i.e. in the provision of basic medical care. The fight against HIV/AIDS in Southern Africa is an example of poor management here.

2. The FC must actively address human resources policies in both sector dialogue and project-related cooperation with partners. Here, topics such as education and further training, the removal of inequalities in the regional distribution of specialist personnel and incentive systems for employees in rural areas are of central importance. In the case of the promotion of private healthcare providers, there is a risk that in many countries the lack of specialists in the already badly equipped public healthcare system will increase.

3. The integration and development of community health workers should be more heavily promoted through programmes in rural regions. They are less likely to migrate to the cities or abroad than fully trained qualified workers and their knowledge of the needs and health problems of communities make them important mediators in health systems.

4. In addition to improving the physical working environment (through the renovation of the infrastructure, laboratory equipment and similar), the FC should also
aim to *improve working conditions*, especially for women. Abuses in this regard must be detected and remedied by means of sensible countermeasures (codes of conduct, more female managers and the establishment of interest groups).

5. If the FC also succeeds in *mobilising private capital* in partner countries in order to strengthen individual medical specialisms, invest in research and development and develop local medicine production, for example, new long-term jobs could be created in the health industry.

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II.8. Natural Resources, Employment and Qualitative Growth

Author: Johannes Scholl

The importance of natural resources for jobs and qualitative growth

Intact ecosystems are the basis of human prosperity. The free services provided by nature perform nurturing, cultural, supporting and regulatory functions. They set the framework for agriculture, which is so important and creates so many jobs in developing countries, e.g. by regulating the water balance, stabilising the microclimate and pollinating crops. They also generate non-monetary income for population groups in rural regions by providing construction materials, medicinal plants and drinking water free of charge.

The “value” of a coral reef

The TEEB report supported by the United Nations Environment Programme (UNEP) breaks down the economic contribution of ecosystems by taking the example of coral reefs. According to the report, these contribute up to USD 189,000/hectare/year to disaster risk management (e.g. by reducing storm surges), up to USD 1 million/hectare/year to nature tourism (e.g. diving tourism), up to USD 57,000/hectare/year to bioprospecting and the use of genetic material, and up to USD 3,800/hectare/year to value creation in the fisheries sector (this because coral reefs perform important functions in the food and life cycle of economically important fish species). FC is providing EUR 15million to support the protection of the world’s second-largest coral reef along the coasts of Mexico, Belize, Guatemala and Honduras.

Quantifying the importance of natural resources for jobs is a complex matter, and often can only be illustrated with reference to examples. Sound estimates exist for industries that are built directly on the use of natural resources, such as fisheries, forestry, and tourism. The total contribution of nature to qualitative growth and employment is far higher than that, however. Intact ecosystems play an important role in regulating global resource cycles and mitigating environmental risks, and thus help secure jobs in all sectors in the long term. These last two points are key to measuring the contribution of intact ecosystems to qualitative growth: sustainability, and the holistic perspective for society at large. A rapid exploitation of resources (e.g. overfishing, clearcutting etc.) can lead to high growth rates in certain sectors in the short term, yet have serious macroeconomic and lasting impacts. This is demonstrated by the lessons learned in forestry and fisheries in recent decades.

Sustainable fisheries

The FAO estimates that global fisheries are worth an annual total of USD 132.85 billion.\textsuperscript{20} The World Bank believes that this figure might be as much as USD 50 billion higher if global fish stocks were to be fished sustainably. To put this in context: since industrial fishery began, commercially fished stocks have declined by 90% worldwide due to overfishing.\textsuperscript{21}

\textsuperscript{20} Food and Agriculture Organization of the United Nations: The State of the World Fisheries and Aquaculture 2012. Rome
\textsuperscript{21} TEEB – The Economics of Ecosystems and Biodiversity for National and International Policy Makers – Summary: Responding to the Value of Nature, 2009
Where sustainable natural resource management in the fisheries sector regulates and monitors rights of access, and establishes protected areas as regeneration zones, it can make a significant contribution not only to ecological growth, but also to economic growth and employment. Here we are not just talking about the quantity of growth and employment, but also about quality in particular: above all, sustainability in the fisheries sector means long-term prospects for business and jobs.

**Sustainable forestry**

Logging worldwide is estimated to be worth USD 100 billion.\(^2\)\(^2\) According to FAO estimates, just under 10 million people around the world are employed directly in forestry or forest management, even though many of them work in the informal sector. Especially in developing countries, illegal logging still accounts for a very high share of the total. The improved regulation of forest management can generate key impetus for growth and employment here, too.

**Mauritania: fish and jobs**

The coastal region of Mauritania is among the world’s richest in fish stocks. FC has been supporting the Mauritanian authorities for many years in fishing surveillance in the 200-mile economic exclusion zone. Since 2012 it has been supplementing these activities with measures to protect shallow water areas, which are particularly important for reproduction and the development of juveniles. This includes the Banc d’Arguin National Park, which covers an area of 12,000 sq km and is a UNESCO natural world heritage site. This will safeguard the 60,000 jobs in the Mauritanian fisheries sector in the long term, as well as the country’s high revenues from fishing quota agreements, for instance with the EU. German consumers will also benefit indirectly from the stabilisation of the global fish supply. FC is providing EUR 12 million to support the project.

One particularly striking example is Brazil. In the Amazon region, which covers an area of over 5 million km\(^2\), over 50% of the land is owned by the state, and a further 27% has no clear legal status. Until 2006, the law did not allow these areas to be used for forest management. Consequently, many companies operated illegally. Since 2006, it has been possible to award forest concessions to private actors for parts of these gigantic state-owned forest lands. This is lifting companies out of illegality, and laying the foundations for sustainable growth prospects in the forestry sector. Legalising these companies and their activities has created jobs that, compared to the informal sector, offer more regular working conditions that are legally protected and enforceable. Today, forestry in Amazonia – which is worth no less than USD 2.5 billion – is generating over 200,000 jobs in the economically disadvantaged Amazon region. As a general rule of thumb in Amazonia, 150 hectares of sustainably managed natural forest generate an

average of one job.\textsuperscript{23} With support of EUR 15 million delivered through Financial Cooperation (FC), it is envisaged that up to 2 million hectares will be made available through new concessions, and be sustainably managed. Applying the aforementioned rule of thumb, this would be equivalent to over 13,000 new, legal jobs.

**Nature tourism**

Nature tourism is one of the fastest growing branches of the tourism industry worldwide. The World Tourism Organisation estimates that nature tourism around the world is experiencing annual growth of 20%, which is approximately six times the growth in the remainder of the tourism sector.\textsuperscript{24} Nature tourism is directly dependent on intact natural monuments such as coral reefs, scenic landscapes and flagship species (e.g. gorillas, whales, tigers etc.), which are often found in national parks or other types of protected area. These monuments facilitate protection of the entire biological diversity of a region, by providing an emotional basis and images that enable people to identify with the area.

On behalf of the German government, KfW is currently financing 280 nature reserves in 35 countries around the world, which cover a total area of over 711,000 km\(^2\) – which is almost twice the size of Germany. A large proportion of this area comprises tropical forests (just under 70%), as well as steppes and savannas (around 18%). Due to their species abundance and physical features, the latter are especially suited to the development of nature tourism. Wherever possible and expedient, potential for sustainable tourism is harnessed in FC projects (e.g. in Southern Africa, see box).

**Southern Africa: nature tourism**

In Southern Arica, together with the governments of five countries KfW is developing one of the world’s largest continuous nature reserves, the Kavango Zambezi Transfrontier Conservation Area (KAZA), which covers an area of 29 million hectares. The countries in the region are relying on international tourism to boost economic development. The rule of thumb in Southern Africa is that for every 8 additional tourists, one job is created. FC is supporting KAZA to the tune of EUR 20 million.

Furthermore as part of its commitment to CSR, since 2008 KfW has been using its own funds to finance the training of five female students a year at the Southern African Wildlife College. By doing so it is not only promoting the work of future gamekeepers, but also creating new professional opportunities for women.

**Conclusion**

Intelligent natural resource management harnesses the locally available potential for development, while safeguarding the rights of the local population. At the same time, in the vast majority of cases nature conservation is not a viable business proposition in itself, and despite the rising number of tourists in some regions will remain dependent on public budgets, development funding and donations in the long term. On balance, an investment in nature conservation may...
nevertheless make particular macroeconomic sense if the area generates significant positive external effects as a result of ecosystem services delivered free of charge.25

Nature conservation and forestry often compete directly with other forms of land use that also create jobs and can induce development, e.g. agriculture, mining or power generation. Establishing and expanding protected areas may therefore also entail negative effects on employment and growth if these alternative forms of land use are included in the calculation. This risk exists particularly in cases where the use of resources is completely prohibited, and/or the opportunity costs associated with protecting the area are particularly high. However, the negative effects on employment can be counteracted, and alternative income can be generated, for instance through development measures in the immediate vicinity of the protected areas that are compatible with nature conservation.

In many cases, the role of FC is to support governments in developing and implementing comprehensive land-use planning. These plans must combine various policy goals such as food security, foreign exchange earnings and nature conservation in such a way that the partner country can pursue a green development path. A strong, capable state, the provision of physical infrastructure, and the protection of relevant public natural goods from which the economy and society as a whole benefit, create legal and investment certainty. This is necessary, so that companies which do business with natural resources in countries can also create sustainable jobs.

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II.9. Private Sector as Engine for Employment and Qualitative Growth

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Companies that remain competitive on the market and that fulfil international environmental and social standards stimulate sustainable and thus qualitative growth. They create jobs and income and contribute significantly to government revenues by their tax payments. They process locally available resources and increase the national value added. By producing and exporting internationally competitive products, they contribute to improving the countries’ foreign exchange balance and account balance.

In international development cooperation, private-sector activities are therefore increasingly perceived as a key factor in fighting poverty and achieving the Millennium Development Goals.

The inadequate access for companies in developing and emerging-market countries to financing for investments however remains a key constraint on growth. It is therefore DEG's purpose - within the scope of entrepreneurial development cooperation - to promote private enterprise initiative in these countries as a contribution to sustainable growth and to improved living conditions of the local population. To this end, DEG provides long-term investment capital and advice to private enterprises in more than 80 countries worldwide. DEG only takes on commitments in projects that on the one hand are profitable while on the other hand make an effective development policy impact and are ecologically and socially acceptable. Developmental broad-based and structural impacts can be additionally enhanced by accompanying measures.

Employment - a key developmental effect of DEG's activities

Jobs create income and provide people with new opportunities for a better life, beyond poverty. Receiving a fair income is a fundamental component of a self-determined and dignified life. Jobs contribute to social recognition and integration and can play a key role in overcoming conflicts. In this connection, job creation for young people is of particular importance in order to offer them prospects, thereby tackling social unrest. A sufficient number of suitable jobs additionally helps avoid unintended internal migration as well as emigration and the related loss of know how.

Creating and safeguarding formal employment thus constitutes one of DEG's key developmental impacts. Within DEG's investment activity, jobs are created across all sectors in which DEG is active (infrastructure, agribusiness, manufacturing sector and financial sector) - albeit to differing degrees. Traditionally, projects from the agricultural sector regularly create more long-term employment than infrastructure projects do.

The direct jobs created and secured by the project companies are socially responsible and generally created on a lasting basis, which guarantees the families...
a sufficient income. Accordingly, the project companies’ hourly wage rates are generally higher than the average wage local employers pay. Furthermore, in each of its investments DEG insists on implementation of and compliance with the IFC Performance Standards. This means, inter alia, that the companies co-financed by DEG must undertake to meet the ILO Core Labour Standards. If the standards required by DEG have not been implemented yet at the commencement of the agreement, an action plan is agreed with the project companies which describes the measures required to implement these standards. DEG supports these measures by providing advice. The jobs that are directly secured and newly created through these financing projects are therefore “good jobs”, which reduce the number of the working poor, thus contributing specifically to socially sustainable, qualitative growth in the partner countries.

Identifying employment effects

Given that employment constitutes one of the key development impacts of DEG’s activities, DEG has been systematically measuring employment effects as an essential quantitative indicator for all projects both ex-ante and ex-post since 2002 within the scope of its corporate policy project rating (GPR). In doing so, it has gathered valuable findings over the last ten years. The GPR considers both direct jobs in the project companies (secured or newly created jobs as well as the number of women in the company) and indirectly secured jobs (with suppliers, outgrowers etc.).

In that way DEG could demonstrate that the current investment portfolio of 2010, amounting to 3.4 billion euros, contributed to securing around 800,000 direct jobs in developing and emerging-market countries in the long term. It is expected that through DEG’s new financings in 2011 alone, around 110,000 direct jobs will be created or maintained by the project companies, with another 130,000 indirect jobs. Furthermore, investments by DEG project companies are anticipated to contribute to government revenues amounting to EUR 790 million p.a. and net foreign currency inflows of around EUR 700 million p.a.

DEG is continuously working on improving its methods of measurement and takes a leading role in harmonising the identification of employment effects within the group of EDFI members (European Development Finance Institutions). Since 2007, EDFI members have jointly been assessing quantitative employment effects.

A particular challenge as regards international impact measurement is the assessment of indirect employment effects. So far, DEG has only determined indirect jobs at the supplier end. In the absence of an appropriate methodology on macroeconomic level, this approach neglects both jobs at the purchaser end as well as the impacts achieved outside the sector (induced employment effects). External experts note that for this reason DEG greatly underestimates the indirect employment effects, generated by its project companies. DEG is therefore testing different approaches in order to fill this information gap. By means of innovative estimation procedures, an external expert put the number of estimated indirect jobs on macroeconomic level, created by six projects from the energy

26 See also: IFC Performance Standards on Environmental and Social Sustainability, IFC, 2012.
27 In 2002 DEG introduced GPR, a sophisticated and complex assessment tool for project evaluation, which measures both the developmental and corporate policy quality of its projects. Developmental effects are highly weighted. GPR measures the (1) long-term profitability of the project, the (2) developmental effects / sustainability, the (3) special role of DEG as well as the (4) return on equity of DEG.
sector alone with an overall commitment volume of around EUR 400 million, at around 160,000, compared to some hundred indirect jobs, at which DEG had put the estimated number of secured jobs.

For the future, DEG additionally works on a systematic recording of the number of created and secured jobs for youth.

**SME promotion as a job engine**

Small and medium-sized enterprises (SMEs) are considered to be the job engines which additionally contribute to a diversification of employment, both regional and sectoral. Particularly for these reasons, SME promotion is one of DEG's strategic aims. Around 300,000 direct jobs were secured in 2010 by DEG's SME promotion.

But there are a number of additional reasons why the promotion of SMEs is increasingly important to DEG with regard to qualitative growth: By cooperating with German medium-sized enterprises which are international market leaders in their segments ("hidden champions"), new technologies and knowhow are transferred to developing countries. Moreover, local SMEs are able to benefit from the international partners' management expertise in case of joint ventures, which enables them to improve corporate governance-standards and control structures, among other things. In view of the expansion of the SME sector and the positive employment effects which it entails, a specific SME promotion ultimately contributes to poverty reduction in less developed countries, thus achieving greater social justice.

**Taxes to ensure sustainable development**

Taxes paid by the project companies can be used in the partner countries for governmental expenditure with a development effect in terms of pro-poor growth, leading towards, inter alia, improved educational and healthcare systems as well as an improved infrastructure. This helps to raise labour productivity and to achieve higher incomes in the long term, thus contributing to poverty reduction.

Furthermore, foreign exchange earnings by internationally competitive project companies make a significant contribution towards securing the partner country’s solvency and stabilising the exchange rate.

**Climate - a strategic aim of DEG**

Development policy is clearly connected to environment and climate protection. That is why sustainable resource use and the corresponding contribution to qualitative growth is a key component of DEG's commitment. In 2010, climate impact was included as an indispensable strategic aim of DEG. Every project is subject to a detailed assessment of its climate-related impact.

Since 2010, DEG has been supporting small and medium-sized enterprises in expanding climate-friendly technologies in developing and emerging-market countries within the framework of the "International Climate Initiative" of the BMU (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety) and its programme "Climate partnerships with the private sector". In 2010 and 2011, twelve projects with a total financing volume of around EUR 2.7 million
were committed in the areas of energy efficiency and renewable energies. Priority areas of promotion were "Energy efficiency India" and "Renewable energies South Africa".

**Corporate Social Responsibility**

Many of the co-financed enterprises assume a particular share of entrepreneurial responsibility. This "corporate social responsibility" includes, among other things, the provision of insurance benefits, kindergartens, health care stations and training centres as well as the implementation of voluntary environmental protection programmes by the companies. By doing so, DEG project companies contribute to qualitative growth also beyond their core business.

**Conclusion**

For a variety of reasons - especially for the creation and safeguarding of jobs - private sector promotion contributes to achieving qualitative growth in the partner countries and can thus be regarded as an engine for employment and qualitative growth.

**Case study 1 - Qualitative growth through job creation and organic cultivation**

In one of the poorest rural regions of China (province of Jiangxi), Jiangxi Jinyuan Agriculture Development Co., a DEG project company founded in 2004, cultivates organically grown rice, freeze-dried organic vegetables and organic fruits which serve both as snack for in between and as food ingredient.

If the province of Jiangxi was viewed separately from China, it would be classified as "low-income country". The project company contributes to eradicating poverty (MDG 1) through the creation of approximately 500 new jobs, thus generating income. Some 18,000 smallholders are additionally integrated indirectly in the project company's value chain. Jinyuan is planning to increase this number by further 3,000 farmers annually. Training measures, among others in husbandry technologies and in the distribution of seedlings, lead to a significant transfer of technology and know-how between the project company and the smallholders. The farmers obtain additional support from the company in the form of advance financing. With its exclusive use of organically grown food products for production, the project company makes a substantial contribution to MDG 7 (ensure environmental sustainability). The sale of organic products helps farmers achieve an income which on average is 15 % higher than it is in traditional agriculture.

In close coordination with IFC, DEG and Proparco (the French development finance institution) each provide a long-term loan to the amount of USD 10 million, thus providing Jinyuan with a solid financial basis for long-term development. This is of special importance due to Jinyuan's remote location where even short-term financing from local banks is hard to obtain.
Case study 2 - Qualitative growth through job creation and corporate social responsibility

The project company Danper Trujillo S.A.C was set up as a processing and export company for tinned asparagus in 1992. It is a joint venture of Peruvian and Danish investors and today Peru's third largest exporter of asparagus. Since 2001, Danper has been diversifying its product range towards high-quality tinned vegetables and the export of fresh asparagus. Among the buyers are leading international supermarket chains. Since 2003, Danper has not only exported the vegetable but also cultivated it.

The labour-intensive vegetable sector particularly offers unskilled workers a possibility of earning a living for themselves and their families: a major contribution to poverty reduction. Danper has a staff of around 10,000, complemented by another 200 indirect employees with suppliers of asparagus, artichokes and sweet pepper. The company pays above-average wages and excels by its social commitment. It supports, for example, the neighbouring villages in improving their waste management and refurbishing the village schools. Danper is certified according to internationally acknowledged hygienic, environmental and social standards. A sophisticated drip irrigation system and a closed circulation system applied on the plantations as well as in processing guarantee resource efficiency.

On top of this, the project helps to achieve MDG 3 "Promote gender equality and empower women", given that roughly 50% of Danper's staff are women which additionally have access to appropriate psychological support and health care. With the company's medical services, especially with the services provided to expectant mothers, the project makes a contribution towards reducing child and maternal mortality as well as chronic diseases.

The project company requires debt capital in order to expand the already existing asparagus fields. The possibilities of obtaining long-term financing from local banks, however, are scarce, given the limited collateral that the project company is able to offer. For this reason, DEG has been assuming the role as long-term capital lender since 2008, providing a long-term loan of 10 million US-dollars.
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II.10. Promotion of Education and Employment

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The role of the education sector in the context of employment

Education creates the basis for employment, the supply of labour – step-by-step from primary education through to the tertiary level for more highly skilled labour. Education creates the resources for employment and for growth in businesses, the public service and, thus, the economy as a whole.

For individuals, of course, education first and foremost has an effect on earnings prospects. Moreover, the level of education determines how people work and what satisfaction they draw from their work. Thus, job satisfaction rises disproportionately with the duration of the educational career, and this effect is dependent only to a limited extent on the higher earnings associated with a higher level of education. Rather, as the level of education rises, so does the qualitative assessment of the occupation by the workers themselves. Conversely, the likelihood of becoming unemployed diminishes with the degree of education, and the duration of unemployment is closely linked to the individual level of education. Even if there may be regional and temporary exceptions to this rule, for instance in the MENA region, where the Arab spring was also fuelled by lack of prospects, particularly for those with a good education, it is certainly a general fact that, from the perspective of an individual, education not only creates income but improves the quality of life overall.

However, the education sector not only provides resources for the job market; it is itself an enormous job market. In the public service sector, the ministry of education usually has the most personnel-intensive budget. In OECD countries, education expenditure accounts for an average 13 % of the national budget (2008). In international agreements on the education sector, partner countries are required to spend 20 % (GPE, formerly EFA/FTI Indicative Framework), with the share of primary education expected to be around 50 %. In developing countries, where investment expenditure made from the education budget is often financed by donors outside the national budget, the share of personnel expenditure in the education budget can be as high as 95 %.

Primary and secondary schools are predominantly public, vocational training and, even more, tertiary education is provided either by private or semi-public institutions. The closer education is to the job market, the easier it is to provide it in a way that conforms to the needs of market. In this area, promoting education can also contribute to boosting the private sector. Involving the private sector in education programmes is particularly important and relevant for improving employment opportunities.

Employment impacts of KfW’s activities in the education sector

In the education portfolio of KfW Entwicklungsbank, primary and secondary school projects account for some 70 % of the portfolio. Promoting employment is not a direct target here, or at best on a very aggregate level, as in Bolivia, where KfW’s contribution to the comprehensive education reform programme also aimed to improve the basic qualifications of the potential workforce.

In contrast, programmes in the field of vocational training are not directly aimed
at creating jobs either but always formulate indirect job market-related goals, which typically include improving the labour potential available to enterprises, often in specific industries, through basic and advanced training measures.

**Direct employment effects**

Irrespective of the defined objectives, all education programmes financed by KfW Development Bank also generate direct employment impacts. As the measures are concentrated on the investment-intensive areas of education sector financing – construction, rehabilitation and equipment of training facilities, provision of teaching and learning materials – the important temporary impacts are first generated in the construction industry and related enterprises as well as, in some cases, the school furniture industry, publishing and printing.

**Promoting employment by building schools in the Palestinian Territories**

Over the past 15 years German Financial Cooperation (FC) has been providing funds from the federal budget to enable girls and boys in the Palestinian Territories to attend school, thereby also helping Palestinians to earn a living through paid work. The buildings are being renovated, expanded or newly built under the Employment Generation Programme (EPG) – School Construction. Local firms supply furniture and equipment for classrooms. So far 81 schools have been completed and another 39 are in planning or under construction.

**Primary and secondary education**

During the construction phase, jobs are created directly in the construction of schools. As they are built primarily in rural regions and poor areas of cities, employment for the poor population is generated in this phase as well. As in the programme "Pooled Funding for Primary Education I and II" in Benin, the workers for the construction measures are recruited locally. This provides them and their families with additional earnings opportunities. Such improved earnings opportunities are often mentioned as intended elements in the impact chains of primary education programmes. These impacts are temporary.

Permanent employment is generated for teaching staff and in school administration, and to a lesser extent for caretakers and/or maintenance staff where these can be funded and are not paid for by parents' associations.

If it is assumed that the construction and rehabilitation of educational facilities lead to an increase in qualifying teaching personnel and the expansion of good teaching offers as planned, then the following – very rough – estimate of the quantitative impacts on the employment of teaching personnel can be deduced: According to the 2011 portfolio analysis, KfW Entwicklungs banco currently reaches some 10.7 million children, teenagers and young adults as target groups of 93 education programmes in 37 countries. The international standard is at least 40 children per teacher. Accordingly, it can be tentatively said that KfW Entwicklungs bank is contributing with its primary and secondary education portfolio to creating, safeguarding or at least quantitatively improving 200,000 teaching positions.

However, in many developing countries only some of the positions mean secure and qualified employment. In many countries teaching positions are filled with
poorly qualified and poorly paid temporary casual staff, which has serious consequences for the quality of education. Here, too, KfW’s work is making an important contribution to improving the situation.

**Technical and vocational education and training (TVET) and tertiary education**

Temporary construction jobs are also generated in TVET and tertiary education projects (some 30% of the FC portfolio). In addition to the described impacts, specialised contributions are often needed here as well, for instance through the provision of laboratory equipment.

Permanent employment is also generated for TVET teachers, although to a lesser extent than in primary education. Developing countries also require candidates to be highly educated for these positions, and they are usually better paid. In addition, the expansion of universities must go hand-in-hand with an increase in positions for professors. In many countries, however, these cannot be filled with domestic staff, so the employment impacts on the domestic job market may initially remain limited.

**Indirect employment effects**

**Primary and secondary education**

Primary and secondary education creates the preconditions for acquiring specific qualifications in vocational training and academic study. However, the direct impacts of basic skills should not be underestimated. Under certain circumstances, just being able to calculate, read and write provides opportunities for the performance of a more highly qualified job. However, markets also develop fast as the education level rises. For example, as education rose in Bolivia, so did the requirements for the skills of the workforce. Soon workers were expected to have a secondary school diploma even for relatively simple work such as that of a delivery man or domestic servant.

**TVET**

Employment effects are at the core of the impacts expected from technical and vocational education and training programmes supported by KfW Entwicklungsbank. These effects are mostly indirect because the programmes target the supply side of the job market while the jobs themselves must be created in the enterprises.

In order to maximise the employment effects, KfW Entwicklungsbank therefore considers it particularly important to involve the private sector as much as possible in the planning and implementation, but also in improving the practical training of teaching personnel, as well as to assure the quality of education through the introduction of an examination and certification system that ensures professional skills. The investments therefore are usually preceded by an all-encompassing sector analysis, and the practical support of individual centres is embedded in a systemic approach. Among other outcomes, this ensures that graduates of the financed facilities will ultimately gain a foothold in professional
life as well. So in the Philippines, for example, on average 70 % of the graduates of the financed TVET facilities found a job compared to 22 % in the facilities not financed.

In addition to KfW's still dominant engagement in the construction and equipping of TVET centres, German Financial Cooperation can draw on further innovative instruments aimed at promoting employment. TVET funds are regarded as a forward-looking instrument for designing basic and advanced training systems in a more sustainable way, and they support the systemic approach by involving businesses through a training levy. Voucher programmes emphasise the demand for basic and advanced training because they let the learners choose where to take their course and in this way promote competition, which leads to an improved offer of basic and advanced training programmes.

Providing rural regions with skilled workers

Until a few years ago, it was almost impossible for children from poor families in the interior of Guatemala to graduate from university. One of the reasons for this was that in remote regions there was no university within reach. Even those who were able to graduate from secondary school often could not afford to move to a city in order to take up academic study. Scholarships are therefore being made available specifically to poor students so that they can go to university.

The university Rafael Landívar has therefore been expanding its regional centres for some years with the help of KfW. New centres have been built and old ones have been expanded. At the same time, the university has developed teaching materials adapted to the specific situation of the rural students, and it has given lecturers appropriate further training. Degree courses now range from forestry and gardening through social work to law. This enables businesses outside the capital to recruit highly skilled employees as well.

Tertiary education

The employment effects of measures aimed at supporting tertiary education in developing countries are lower in quantitative terms than in TVET but particularly important because they provide the highly skilled resources for research and teaching, which are particularly scarce in many developing countries. Moreover, it is very likely that graduates become entrepreneurs or contribute to the creation of more and/or highly skilled jobs in enterprises.

A focus of development policy may be to improve regional access to tertiary education, which is being done in Guatemala, for example, where KfW is supporting the expansion of regional centres of a university.

Conclusion

Education is a core element of employment promotion; education provides the workers for the job market. The education sector not only generates employment but is a large job market itself. While the massive expansion of primary education has already been successful in recent years, much remains to be done to improve the quality of education and to expand the higher levels of education which are particularly relevant for employment over the long term. KfW is taking on these tasks with its education programmes.
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Climate protection is one of the biggest challenges we will face in the next few decades. According to the Stern Report, published a few years ago and named after the former chief economist of the World Bank, Nicholas Stern, climate protection has considerable economic effects. The consequences of a lack of climate protection or insufficient protection are especially notable. When climate protection does take place, it can invigorate the economy, give it new impetus and create additional jobs – or at least this is the assumption. CDM projects provide important indications as to whether this connection really does exist and what specific effects can be achieved, especially in emerging and developing countries.

Part of the Kyoto Protocol's international climate protection regime, the Clean Development Mechanism (CDM), dates back to 1997. It is one of the Protocol's "flexible mechanisms", allowing industrial nations with an obligation to protect the environment to achieve their reduction targets by supporting appropriate projects in developing countries, amongst other things. These CDM projects generate emission certificates which help purchasers in industrialised nations to meet their reduction plans. In addition – and this is the exceptional thing about this instrument – their proceeds promote development in the host countries.

This dual purpose is already set out in the Kyoto Protocol, where the CDM is described as a climate protection instrument, which simultaneously aims to support sustainable development in the project countries and to bring about a range of direct and indirect economic and social effects. The KfW Climate Protection Fund acts as a marketing platform for such project-based emission credits and thus makes an important contribution to the realisation of CDM projects. These projects would be impossible without the additional income from the sale of certificates. The KFW's portfolio covers almost one hundred CDM projects which together avoid the emission of more than 40 million tons of CO$_2$e.

As shown by the activities of the KfW Climate Protection Fund alone, CDM projects certainly contribute to climate protection. But do they also contribute to development, growth and employment, which is their second intended effect?

Results to date
Since it was launched (the first project was registered in 2005), the instrument has been repeatedly re-evaluated even though a standard and internationally binding system for measuring sustainable development does not actually exist. Nevertheless, various bodies including the United Nations Framework Convention on Climate Change (UNFCCC) and the World Bank along with consultants, local populations and other parties involved in the projects have confirmed that the CDM makes a notable contribution to sustainable development in the host countries.

Most analyses of the effects to date have been based on project design documents (PDDs) or constitute evaluations of individual projects during their execu-
tion. Up to now, there have not been many ex-post analyses directly concerned with the effect of CDM projects on employment in developing and emerging countries. Despite these limitations, initial findings can be gleaned from the available studies since the results are similar to those of a whole range of research on key points.

The major 2011 UNFCCC study ("Benefits of the Clean Development Mechanism 2011" – UNFCCC) is particularly noteworthy. It was based on more than 3,200 CDM projects which have jointly saved more than 2 billion tons of CO₂e emissions. The investigation concentrated on three core points: sustainable development (climate, environmental and development policy), the transfer of modern technologies and investment flows. According to the results, a positive effect on sustainable development can be demonstrated in the case of the majority of the CDM projects. The effects most frequently mentioned include new jobs (23% of all projects) and less noise, smell, dust or other airborne pollutants (17% of all projects). These results coincide with various earlier studies, which also demonstrated an impact on employment followed by economic growth and improved air quality.

In addition, more general investigations into the benefits of a sustainable, low-carbon economy ("green economy") in industrial and emerging countries prove that the number of jobs rises in comparison with "business as usual" scenarios. More precise analyses take qualitative aspects relating to the workplace into account as well as the number of new jobs. These studies also demonstrate positive results overall.

**Special standards**

Effects on employment primarily result from projects which meet high standards for environmental and development objectives in the host country. This applies, for example, to projects which meet the requirements of the Gold Standard (GS) and are certified accordingly. The Gold Standard, conceived by the WWF amongst others, defines specific CDM project categories to ensure that projects are sensible and in line with the objectives of the Kyoto Protocol. Approved categories include renewable energy projects and projects which reduce the demand for energy.

With regard to employment, Gold Standard projects must also create measurable added value in at least two of the following areas:

- **Job creation:**
  New employment opportunities are generated by the projects at various quality levels; workers, skilled employees, contractors and local management are involved in the project design and implementation phases.

- **Improvement of working conditions:**
  New jobs are subject to fair conditions, which are geared to the standards of industrialised
nations.

Developing local capacities:
Employees and stakeholders must be educated and trained as part of the projects; their expertise should increase steadily.

CDM projects which observe Gold Standard stipulations must measure their impact. This is how we know, for example, that wind power projects – which at 28% of the total number of projects constitute the majority of GS projects – almost always create additional jobs, even if some are only temporary such as jobs involving the construction of the plants or the improvement of the associated infrastructure (e.g. the construction of access roads).

According to the majority of analysts, this type of project has a significant overall impact – both quantitatively and qualitatively – with regard to the creation of jobs. Only around 200 CDM projects follow this standard, but this number is growing.

The project size is not the decisive factor
Studies show that economic and social effects do not necessarily increase along with the size of the project. On the contrary, a study by the German Federal Environment Agency concludes that in fact small projects – which are often also decentralised – have a particularly favourable effect because, relatively, they create more jobs. Small projects of this kind in the fields of agriculture, food production and domestic energy savings (biogas, energy-saving stoves) do not reduce emissions anywhere near as much as major industrial projects yet frequently exhibit a significant impact on growth and employment.

So far, however, the CDM has been dominated by major industrial projects because, amongst other reasons, the cost of the inspection procedure is virtually the same regardless of the size of the project. This expenditure would be disproportionately high for small, often extremely innovative projects. As a result, it tends to be the larger projects in bigger countries which get a look-in. Smaller or poorer countries, where the conditions for more comprehensive projects do not yet exist, tend to be overlooked. In recent years, this has been counteracted through the promotion of programmes of activities (PoAs). Programmatic projects cut greenhouse gases by stimulating a large number of individual measures, each of which could not absorb the CDM transaction costs on its own. Measures might take the form of a large-scale scheme for the replacement of incandescent bulbs with energy-saving bulbs, for example. On behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), KfW is promoting the development of a portfolio of feasible PoAs and is soliciting programme suggestions with this purpose.

Different project types
With regard to project type, large industrial gas (HFC-23, N2O) and wind power projects make up the largest part of all registered CDM projects. Their contribution to cutting greenhouse gases is undisputed, but studies show that the social and economic significance of industrial gas projects in particular is rather low. Biomass and hydroelectric projects are frequently major undertakings, too, but assessments of their contribution to innovation, technology and finance transfer differ.
Regional distribution
The regional distribution of CDM projects is still very uneven. Three quarters of these projects are based in just four countries: China, India, Brazil and Mexico. The majority of CERs (certified emission reductions) are achieved in countries which attract a great deal of direct foreign investment anyway. This leads to a regional imbalance in CDM investment flows between nations and even within a single country. Take India, for example: according to a study, most CDM projects along with investment and economic benefit take place in those Indian states where the per capita income and gross social product are greater than the national average. The poorest Indian states, on the other hand, are home to only a few CDM projects and correspondingly less investment which would be able to boost the economy and create jobs.

Key categories
According to studies, projects in the fields of renewable energies and energy efficiency exhibit the greatest potential for generating income and creating jobs, especially in rural areas. So far, only isolated results are available for the following sub-sectors: in the case of biomass, for example, the plan to use agricultural plant residues has a much better impact where employment is concerned than projects which process waste products from industrial forestry. In the field of fuel switching, findings to date suggest that few additional jobs or improved environmental conditions are created, although the contribution of such projects to the prevention of emissions is undisputed.

Results for CDM refuse projects are also complicated – on the one hand, the CDM provides a considerable economic incentive for the introduction of better disposal techniques in developing and emerging countries; on the other hand, studies prove that recycling projects create far more employment and generate higher incomes than disposal and waste incineration projects. This is because the people who tend to find employment in the field of recycling (collection, sorting, material processing and actual recycling) are frequently those with few qualifications. However, such jobs are often in the informal sector. Whether CDM projects help to create long-term jobs or have a negative impact due to the elimination of the need for manual rubbish collectors, for example, has been difficult to assess so far due to the limited number of analyses and reliable data.

Summary
Both non-governmental organisations and economic experts consider the CDM to be a successful tool overall and believe that it contributes to qualitative growth on several levels. Without a doubt, CDM projects have reduced emissions, developed infrastructure, triggered investment, and kick-started projects. They have intensified technology transfer and brought about economic multiplier effects through greater demand for well-trained workers, for example. In many host countries, CDM projects have also improved awareness of low-carbon technologies and provided leverage for climate-friendly projects. The activities of the KfW Climate Protection Fund have also created incentives for a long-term change of attitude on the part of companies and households (through start-up financing in the case of PoAs, amongst other things). The Fund has also marketed anticipated carbon credits and thus helped sustainable projects to be carried out in developing countries.

Studies also show that the importance of CDM projects for the various local markets cannot be underestimated. Although the volume of available data is still in-
adequate, various analyses and case studies prove that CDM projects and programmes can contribute to environmental protection and economic growth. Positive effects on employment are primarily generated by CDM projects with specific standards (e.g. the Gold Standard) and by small CDM projects in the fields of household efficiency (cooking stoves, small biogas plants) and solar, water and wind power.

According to research, the concept of dual purpose (combining climate protection and development) as set out in the Kyoto Protocol is thus upheld.

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[http://www.kfw-entwicklungs-bank.de/ebank/EN_Home/Climate_Change/Sustainability_and_Climate_Protection/index.jsp](http://www.kfw-entwicklungs-bank.de/ebank/EN_Home/Climate_Change/Sustainability_and_Climate_Protection/index.jsp)
II.12. Urban Development and Effects on Employment

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History tells us that urban societies have always been the force behind cultural, economic and social developments. With the benefits of agglomeration resulting from close networks of contacts, short distances, the proximity of like-minded people and the bundling of knowledge and skills in spatial proximity, the concept of the town provides ideal conditions for progress and innovation.

"The city sets you free!"

This mediaeval legal principle whereby a serf could gain his freedom through living in a city for a year still has a figurative significance today. Millions of people still migrate from the country to the towns and cities. Doing so opens up broader career prospects and enables a lifestyle which is more independent than that allowed by the often stifling cultural and social ties of rural life.

In addition to the demand for labour from the manufacturing economy, the division of labour in cities leads to increased demand for services and thus opens up employment opportunities for a very wide range of qualifications. Towns and cities provide a critical mass of people with different needs and interests, thus enabling a diversified range of services.

Increasing urban poverty

However, towns and cities are increasingly unable to completely fulfil the expectations placed upon them. Although up to 80 percent of global economic output and new job opportunities are generated in towns and cities, this is usually not sufficient for the rapidly growing urban population. In developing countries, the economic basis of towns and cities is often still weak. Moreover, the service orientation found in towns and cities has historically been associated with a high proportion of precarious jobs, and this remains true today.

Estimates indicate that in some developing countries between 70 and 90 percent of all value creation can be attributed to the informal sector. It is one of the business branches subject to the most dynamic development, but it is also made up of a multitude of hard-working poor who cannot earn an adequate living even with several jobs.

Employment in towns and cities: decent work for all?

Whether or not potential urban employment opportunities actually result in long-term employment for the urban population depends on the social, economic and statutory framework conditions of the case at hand.

At KfW's international "Employment and Development" conference, held in Berlin on 15 and 16 March 2012, the main speaker, Professor Dani Rodrik (Harvard University), pointed out that the policy of mainly intensifying market forces and liberalising markets to achieve growth, pursued by the World Bank and IMF and
called the "Washington Consensus", was not fundamentally wrong but that sus-
tainable, poverty-reducing economic development could not be ensured without
additional measures.\textsuperscript{29}

Taking these framework conditions into consideration, KfW can directly and indi-
rectly affect the employment impact of urban projects and programmes sup-
ported by Germany. In doing so, special attention and consideration must be paid
to the large number of interactions found within the closely woven web of urban
life.

**KfW field of work: urban infrastructure**

Many urban projects of Financial Cooperation are sectoral projects – energy and
water supply, waste water and refuse disposal and the construction of schools
and hospitals.

The relevance of such programmes and projects to employment differs depending on
the sector concerned. The construction and operation of infrastructure can affect
employment. Through these projects, KfW can bring about the modification of tendering
conditions, which also promotes local em-
ployment. Contracts placed with regional and
local firms enable these companies to
achieve further qualification with regard to
international standards, thus also opening up
employment opportunities beyond these initial
jobs.

In addition to the direct sectoral im-
 pact on employment, these projects have
other consequences for macroeconomic development: schoolchildren and teach-
ers require residential accommodation in the city, for example. They buy food
and other goods and in this way strengthen general demand and employment
opportunities in a very wide range of areas (such as administration, hospitals,
markets and ports).

Naturally, projects improving urban services can also have a negative impact on
employment. However, as the example of the rubbish collectors (see box) shows,
it is possible for this impact to be minimised or even completely prevented by
means of appropriate project design.

**KfW field of work: efficient urban mobility**

Efficient urban mobility creates the conditions
necessary for efficient urban economies. Projects
of Financial Cooperation for sustainable public
transport reduce the time required to travel to
work and go shopping, thus contributing to quality
of life and work.

Increased efficiency of urban mobility (more
efficient public transport, city logistics) increases

\textsuperscript{29} KfW web page: \url{www.kfw.de/employment-conference}
commercial productivity on the one hand, thus promoting employment and reducing poverty; it can, however, also destroy basic jobs in the transport sector (e.g. bicycle couriers, rickshaws).

Any analysis of the impact of such measures on employment must take these various aspects into account. Thus, in a project of Financial Cooperation in Khulna, Bangladesh, the improvement of the public transport infrastructure is being combined with action which facilitates basic delivery methods: separate safe lanes for rickshaws and all-weather roads from the poor districts to places of work in the town centre.

**Rubbish collectors – unemployment or qualification?**
Gains in efficiency such as the removal of waste using dustcarts or the awarding of contracts for the collection and transportation of rubbish to commercial companies can also lead to the loss of basic, informal jobs (manual rubbish collectors and recyclers).
An project by KfW for regulated rubbish handling in Denizli, Turkey, takes this into account and includes such informal job opportunities in the overall concept: "waste pickers" have been given the chance to organise themselves into a cooperative and qualify for employment in the field of regulated recycling.

**KfW field of work: microfinance/financial sector**
Above and beyond access to loans, access to financial services is an important factor in improving employment opportunities in towns, cities and elsewhere.
Rising income drives additional consumption and the large number of urban dwellers alone causes rising demand for services – both expert and basic – which can only be provided or expanded with temporary or start-up financing via small loans.
Microcredits can create job opportunities for members of the urban population who would otherwise only be able to participate in working life to a limited extent. Although the initial equipping of small businesses is often achieved through help from family, friends or neighbours, access to microcredits allows small businesses to be put on a firm footing. As a rule, borrowers only have to meet restricted criteria in order to qualify and their businesses are able to remain quite informal. This will strengthen the local economy, especially in poor areas.
Group loans, where small businesses from the same sector stand guarantor for each other, are also granted in this as yet informal sector. In towns and cities where there are several businesses in the same sector, this form of lending is particularly beneficial.
Obviously, when a business becomes bigger and people from outside the family are employed, the urban environment facilitates the development of the business from a microfinance customer to a regular borrower. The number of projects of this type is in evidence larger in towns and cities than in rural areas.

**Complex correlations**
Due to the complex functional chains, a “counting” of employment impacts will often be difficult and can be measured to a limited extent only: the interfaces with other influencing factors – the interdependencies, which often only bring about a
positive effect when they work together – are simply too diverse. It will only be possible on the long run to determine whether jobs really have been created or have just been relocated.

The issue of whether jobs have been created or relocated is also important with regard to ongoing discussions on the competitiveness of towns and cities internationally (city rankings). Frequently, such rankings give rise to the idea that a better position would make towns and cities more attractive to national and international investors and could thus increase their economic power in the long term. Investment in preparatory work (infrastructure, renovation etc.) triggered in this way in one town or city may, however, result in more employment in that town or city but a loss of jobs in another due to the migration of branches of industry. Here, too, the long-term effects must be analysed.

Cobblestone programme for a labour-intensive infrastructure
KfW is financing various urban infrastructure installations as part of the German-Ethiopian urban decentralisation scheme. This scheme also supports the Ethiopian government's programme to promote labour-intensive technologies: roads and paths in towns and cities are being paved. A parallel programme of the German Agency for International Cooperation (GIZ) trains the required workforce, from quarrymen and stonemasons to road builders and pavers. In addition to the positive impact on the street's appearance, shops along paved roads record clear rises in sales; life is easier for people as they can now reach homes and businesses even when it's raining. Moreover, skilled crafts and trades, which culturally have not been particularly valued in Ethiopia, have gained new acceptance.

Summary
Despite all the uncertainty, appropriately designed urban projects do offer the required prerequisites and opportunities for long-term urban employment. KfW's projects and programmes in towns and cities can make a relevant contribution to creating productive and humane employment opportunities. This is particularly true if these projects analyse the diverse urban points of intersection with other topic areas and exploit the synergies there in addition to sectoral goals.

Financial Cooperation by KfW can thus make a contribution which is vital – even if it is not sufficient on its own.

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Sustainable waste and resource management is of crucial importance for achieving fundamental development objectives. It is an important precondition for sustainable economic and orderly urban development. The sector provides enormous employment opportunities even for lower-skilled people. Waste management makes a crucial contribution to urban hygiene, preventive health protection, environmental and climate protection, and efficient use of resources. Ten to 15 per cent of a country's national greenhouse gas emissions can be avoided by effective waste management and recycling1.

The development of sustainable waste management systems thus holds great potential for achieving economic, ecological and social progress. The establishment of sustainable waste management systems, however, is also a great challenge and a time-consuming process. Nevertheless, KfW Entwicklungsbank plans to intensify its engagement in the sector and is developing new approaches to mobilise the potential of the sector for quantitative growth.

"Sustainable waste management is of crucial importance for

- The health, quality of life and income of people, particularly of the poor and marginalised population,
- The protection of the environment and the efficient and sustainable use of natural resources, and
- The reduction of greenhouse gases and, thus, the protection of the climate."

The core messages of the recently published BMZ strategy paper entitled 'Waste as a Resource' clearly underline the importance of the sector for qualitative growth: the establishment of sustainable waste and recycling management systems is an indispensable element of development processes that aim to achieve sustainable economic, ecological and social progress.

A precondition for sustainable economic development

Sustainable economic development and quantitative growth are unthinkable without waste management. Raw materials and energy are major cost factors for the manufacturing sector, particularly in developing countries. The economies of many industrialising and transition countries are already in a situation in which the inadequate supply of raw materials and energy on the one hand and the con-
T amination of the environment as a result of uncontrolled waste disposal on the other hand are hampering economic development. The insufficient resource and energy efficiency of production processes is putting enterprises at risk of losing their competitiveness. Waste is a source of raw materials and energy that must be tapped through intelligent waste and resource management.

In the long term, inadequate management of waste deprives enterprises of their production basis if production facilities and employees are contaminated by improperly eliminated waste. Sales markets in industrialised countries, especially in Europe and the USA, are at risk of being lost if enterprises are unable to meet their clients' demands for compliance with environmental standards. Tourists are put off by rubbish dumps and prefer holiday destinations with environmentally sound waste disposal systems. Rubbish dumps and inadequate waste management signal to potential investors that the public administration is not very competent and not efficient. They prefer to invest their money where they encounter professional administrations.

**Orderly urban development and preservation of the natural bases of life**

Sustainable waste management is an important element of preventive health care. It is indispensable for orderly urban development and preservation of the natural bases of life.

Waste that is improperly disposed of compromises urban hygiene and poses health risks to the population. It forms breeding grounds for carriers of diseases and is a source of food for rats and vermin, creating ideal conditions for the spread of pathogens. This affects the poorer segments of the population most of all.

Wild rubbish dumps pose a threat to water bodies, soils, nature, landscapes, flora and fauna and contaminate drinking water resources, rivers, lakes, coastlines and oceans. Landfill gas, fires, smoke and odours pollute the air, which has negative impacts on human health. Rubbish dumps use up and contaminate the land and usable areas, compromising the visual appearance of towns and landscapes.

Blockage of canals and drainage facilities causes flooding in built-up areas even with average precipitation, particularly in the usually lower lying living quarters of poorer segments of the population. Uncontrolled rubbish dumps pose a risk to drinking water supply facilities and contaminate irrigation channels. Without orderly waste disposal, other infrastructure facilities cannot be sustainably operated either. Residues from the filtering of exhausts from power plants and industrial combustion facilities (clinkers, hashes, filter dust etc) or from wastewater treatment (sewage sludge, screenings, grit slurry) have to be properly disposed of, as does slaughterhouse waste, construction waste, waste from markets, green

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spaces, schools, hospitals and much more. Orderly urban development is not possible without proper waste management.

Cities in focus
As centres of economic development and population growth, cities are confronted with waste problems to a particular degree, and the health impacts there are most severe. The fast-growing mega cities and conurbations in industrialising and developing countries in particular must find solutions to their enormous waste problems. Already 40% of Africa's population lives in urban areas. In Asia the number of urban dwellers will almost double from 1.5 billion to 2.6 billion people by 2030. The municipalities, which are usually in charge of waste disposal, however, are hardly able to cope with the complex task of managing the waste. Waste disposal "devours" a large share of their scarce funds. Municipalities in developing countries are already using 20% to 50% of their municipal budget for waste collection alone. Nevertheless, a considerable portion of the urban population is not receiving reliable waste disposal services. Some of the waste is not being disposed of at all and remains near homes, which occurs mostly in the growing shantytowns.

"The direct greenhouse gas emissions of the waste management sector contribute 'only' around 3% to 5% of global anthropogenic climate change. However, by avoiding and recycling waste, sustainable waste management can induce greenhouse gas reductions in all industries that are many times higher."

Sustainable waste and recycling management reduces emissions that harm the climate particularly through
- Avoidance of methane ('landfill gas'), which is particularly harmful to the climate
- Recycling – reducing greenhouse gases through efficient use of resources
- Use of waste to produce energy - substitution of fossil fuels


The informal sector – a motor of resource efficiency
Traditionally, waste has been an important source of income for the poor population. Recycling of paper, cardboard, metals, textiles, leather, bones etc is ever-present in developing countries. Roughly 1% of the urban population lives on and from waste. However, their work is inefficient and performed under highly unhygienic and dangerous working conditions, usually by poor and marginalised groups of the population. These people otherwise have hardly a chance to achieve regular income in formal employment. In most cases, the whole family has to help out to secure its livelihood. Child labour is the rule, with all its negative consequences.

Jobs
The establishment of sustainable waste management systems is of crucial importance for a green economy. Waste management in general and recycling in particular create considerable employment opportunities even for people with limited skills. Even illiterate persons can be productively employed in collecting and sorting waste. This opens up occupational and income opportunities for disadvantaged groups of the population, contributing to achieving MDG 1 - reducing poverty.

The challenges in developing countries mainly consist in involving the informal waste collectors in the waste management concepts. The hygiene situation, income opportunities and recycling quotas can be considerably enhanced by improving the overall conditions and through cooperation. However, to achieve this it is necessary to build trust among all stakeholders – political decision-makers and the administration as well as the informal sector. Where this has been successful, parents no longer depend on help from their children and allow them to go to school. This gives children a chance for an education and a better life.

In Denizli, western Turkey, this approach of integrating the informal sector has been applied by granting licences to the informal waste collectors who can now work for the municipality. As a result, the recycling of reusable materials (mainly paper, glass and plastic) has been continuously expanded. The activities are now economically so attractive that private enterprises are becoming involved and new formal jobs are being created.

Protecting natural resources
Further approaches aim to not only recycle 'traditional' reusable materials but to reuse as large a share of the waste stream as possible. Packaging, used appliances and electronic devices, plastics, construction waste, refrigeration equipment and much more contain valuable and even rare resources that would otherwise have to be imported at a high cost. Organic wastes such as kitchen waste and food scraps, garden waste and clippings, market and slaughterhouse waste, sewage sludge, agricultural waste such as slurry, dung and harvest residue can be used to produce biogas and soil conditioners. Waste with high calorific value, separated and processed, can be used to generate electricity, for example in cement factories, thus substituting fossil fuels.

Global challenges call for more sophisticated approaches
The primary goal of the waste management projects financed by KfW Entwicklungsbank is to create the fundamental structures for proper, reliable and sustainable waste disposal. The institutions thus established, the personnel trained and the planning and funding instruments are to give the partners a solid foundation on which to further develop the waste management systems on the way to a
circular economy. In addition to strengthening recycling through the inclusion of the informal sector, the main investment is a landfill built to European standards in which waste is disposed of in an environmentally safe way. Emissions, particularly leachate and landfill gas, are captured and treated as far as technically and operationally viable. This is a significant improvement over the usual disposal of waste on uncontrolled waste dumps, but ultimately only a compromise between what is economically viable and ecologically desirable.

The global challenges, particularly the demographic trend in the developing countries, the dwindling of resources and climate change make it necessary to give these objectives significantly greater priority. In future, integrated and recycling-orientated strategies are to receive even greater weight so as to enable the partner countries to more quickly introduce advanced processes and technologies. Wherever possible, the aim is to leapfrog development stages and, in particular, unfavourable developments that have occurred in Germany.

However, the financial and implementing capacities of the partner are often not sufficient to make the technological and efficiency leap that would be desirable from an environmental, climate and resource conservation perspective. Therefore, the strategies and processes for waste recycling and processing must be adapted to the local conditions. Appropriate, cost-efficient organisational structures must be developed, additional funding sources, particularly through the carbon markets and climate protection funds, have to be mobilised, and instruments must be developed to cover costs with tariffs after external financing.

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From the promotion of individual projects to the development of the sector

On the basis of experience gathered in Tunisia, where German Financial Co-operation has been instrumental in developing the waste management infrastructure and implicitly participated in the development of the sector over the last 12 years, essential elements of this 'sector approach' are now to be applied in the development of the waste management system in Egypt. Together with German Technical Cooperation and with support from the EU, a programme has been agreed that comprises the establishment of waste management infrastructure as well as the development of the legal, financial and institutional conditions as well as the planning capacities and instruments. The main element is to establish a state sector institution that combines the technical and regulatory competences at the state level and efficiently uses the scarce human and financial resources.

In another project in El Salvador, on behalf of the federal government German FC is supporting the implementation of the "National Waste Management Improvement Plan". An eco-friendly, resource-conserving and economically sustainable waste management system is to be introduced here by 2025. In addition to developing municipal infrastructure, the project includes the improvement of the management and control function of the sector ministry.

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Pfaff-Simoneit, Wolfgang: Entwicklung eines sektoralen Ansatzes zum Aufbau von Abfallwirtschaftssystemen in Entwicklungsländern vor dem Hintergrund von Ressourcenverknappung und Klimawandel, Doctoral Thesis University of Rostock, Faculty of Agricultural and Environmental Studies, Rostock/Darmstadt 2012

ends in order to ensure the sustainability of the investments.\textsuperscript{34}

Experience shows that the mere delegating of responsibilities and waste management functions, which is common in most partner countries, puts an excessive strain on the municipalities and impairs the development of the sector.

German Financial Cooperation considers itself called upon, beyond the 'classic' approach of supporting projects with municipal executing agencies, to become involved in promoting the overall sector conditions as well.

\textbf{Designing waste management concepts to create jobs}

In addition to greater engagement on the 'macro level', labour-intensive projects aimed at protecting resources and the climate also require the development of adapted processes at the micro level. Capturing materials of the highest possible quality, that is, materials that are clean and have few impurities, is not only a precondition for the use of waste but also creates considerable employment opportunities. Collection, separation and processing of waste and reusable materials provide enormous potential for employment and contribute to developing a green economy.\textsuperscript{35}

Thus, the concept of waste collection and waste separation have decisive influence on the socially compatible design of a waste management concept. The collection and logistics systems in use in industrialised countries were developed under the conditions existing there with the aim of making the collection as efficient as possible and saving labour costs. Wherever possible, manual labour is replaced by the use of machines and capital. In contrast, in developing countries labour is available at reasonable cost and a high employment impact is desirable from the point of view of development policy. The collection systems in use in industrialised countries therefore do not fit the reality of people’s lives in developing countries. Rather, technically simple systems with a high degree of service based on the principle of home collection, which uses simple collection and transport techniques, are more appropriate. They achieve higher collection rates and have higher employment potential. Therefore, the promotion of projects will also have to include the development of differentiated collection concepts and the establishment of the organisational and technical compatibility between technically simple primary collection systems and modern logistics systems. To achieve this it will be necessary to implement model projects, evaluate and propagate best-practice examples and support the municipalities in their implementation.

\textbf{Conclusion}

The establishment of waste management systems that are aimed at protecting resources and the climate offers outstanding opportunities for aligning economic, ecological and social objectives. Despite the enormous challenges involved, KfW Entwicklungsbank will intensify its engagement in the sector and develop new approaches to mobilise the potential of the sector for qualitative growth in the partner countries.


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The promotion of water supply is intended to improve people's quality of life through the provision of an adequate and safe water supply and a comprehensive sanitation system. Water supply projects primarily target improved health and environmental protection but are also selected and formulated from the point of view of job creation and job preservation.

Amongst other things, KfW promotes investment in water production, distribution, waste water disposal and water recycling. Total grants to the water sector (including waste water and refuse) amounted to around 720 million euros in 2011. These projects have both a direct and an indirect effect on employment in the partner countries.

**Direct effect on employment**

The *building of the installations* creates new jobs or secures existing jobs within the construction companies who are awarded the contracts. Where possible, building services are put out to tender locally in the partner country in order to strengthen local businesses and improve local employment prospects. However, even when projects are put out to international tender, the majority of the work which takes place during construction benefits the national workforce since international companies also recruit locally as much as possible for cost reasons.

The operation of the supply and treatment installations also secures existing jobs or creates new ones, e.g. in the case of employees at water works and sewage plants or pump engineers who are required to carry out the regular maintenance of rural wells. At the same time, it can have adverse effects if, for example, inefficient water supply companies introduce rationalisation measures in order to achieve an operationally efficient supply which is more economical for the consumer. Statistics such as the number of water supplier employees per 1,000 domestic connections are regularly collected and can provide an insight into the net impact on employment on a case-by-case basis.

**Indirect effect on employment**

Indirect positive effects on employment can be significant if the state of the water sector in a state, region, city, town or village constitutes a significant hindrance to health. If the prevalence of water-borne disease is reduced, the workforce becomes healthier, which is extremely significant with regard to maintaining the livelihood of workers.

On the other hand, indirect negative effects on jobs can occur if central supply companies replace informal service providers (private water deliveries by lorry) or if an improved central water supply reduces the demand for bottled water and thus causes the turnover of bottle manufacturers and bottled water sellers to drop.
**Value creation chain of suppliers**

Most water projects also aim to help local supply industries to develop. Water projects can therefore create jobs throughout the supplier value creation chain (including manufacturers of pipes, water pumps and solar panels, software manufacturers, chemical companies, security services, cement manufacturers and training providers). Temporary jobs are created here during the construction phase and permanent jobs are created when the supply and waste water disposal installations start operating.

**Freedom of choice for companies and households**

The indirect effects of an improved water supply and waste water disposal system at corporate level are diverse. They differ depending on the company’s sector, location and specific business model. A drinks manufacturer with no further need to produce its own water, a school that doesn’t need its own spring, a dairy that no longer has to install its own water tank – all of these entities are given scope to develop and free capacity which they can use productively (productivity increase, reduction in costs).

At a domestic level, especially in rural areas, it is mainly women and girls who are responsible for water-related work. If water quality, water availability and waste water disposal improve, households have to spend much less time and money on fetching water, storing it, purifying (boiling) it and disposing of it. The reduced prevalence of water-borne diseases and corresponding reduction in expenditure on nursing lessens the load on women in particular. The time saved can be used productively in economic terms (e.g. through work which generates an income).

Water prices rarely fall as a result of development cooperation projects, since the starting level for water and waste water tariffs is usually too low to cover costs.

**Water Services Trust Fund in Kenya**

The Water Services Trust Fund provides urban water supply companies in Kenya with grants and technical support for poverty-orientated investment. Amongst other things, water kiosks are built to improve the water supply in urban slums and areas on the outskirts of towns and cities. Water kiosks are little shops where clean drinking water is sold from taps. They are connected to the urban water distribution network, so the water’s quality and price can be checked and guaranteed. Other daily necessities such as flour and soap are often sold alongside the water. Most female kiosk operators are able to live on their earnings from the shop and their small wage for maintaining the water station. Within this programme, the KfW works closely with the German Agency for International Cooperation (GIZ) and the EU Commission. It has thus been possible to improve the water supply of more than half a million poor people in Kenya. The construction of 300 new water kiosks and the repair of another 40 has had a direct positive effect on employment. The kiosks have provided their operators with a new job and source of income.
However, here too, an improved water supply and waste water disposal system as a result of new investment and changed operating modes generate leeway for all those involved, which can have an overall positive impact on the demand for goods and services and thus on employment.

Water as a raw material
Water is a raw material and input for numerous sectors including agriculture and forestry, fishing, the energy sector (e.g. hydroelectricity and power station cooling) and industry. Along with energy, transport and communication, water is a location-determining factor for direct foreign investment and a tool for promoting industry and trade. An improved infrastructure for water supply and waste water disposal is also one of the bases for investment, economic growth, employment and combating poverty.

Water conflicts cost jobs
If water shortages lead to distribution conflicts between users (water stress) and if this even causes cross-border conflicts between states, as the risk of war increases, the framework conditions for the economy, growth and employment suffer. In this case, water has a high potential for causing conflict and economic disruption. Water conflicts can be assumed to be detrimental to economic growth, costing existing jobs and impeding the creation of new jobs. This is why FC projects concentrate on integrated water resource management with the aim of preserving scarce water resources in order to avoid these conflicts about water.

Jobs for women?
Very few jobs for women are created during the construction phase, since it requires hard physical labour. However, women do find work relating to the subsequent administration of water supply companies. Above all, tap attendants in rural systems and in urban systems with taps are often female. Women are also trained as mechanics who then regularly repair and maintain the water pumps as part of projects to supply rural areas with water. Overall, however, the direct impact on employment for women is less than for men in the water sector.

The indirect effect on employment in water-impoverished countries is, however, often more significant for women than for men. As mentioned above, improved access to scarce water resources by women can improve the conditions for productive, income-generating occupations.

Summary
Development Cooperation water projects can help to preserve jobs and create new ones. Water supply and waste water disposal are both important influencing factors for health and major location-determining factors for the business sector, which is decisive for both formal and informal employment.
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