

# Adaptation to Climate Change in the Water Sector

**4th Africa Water Week**

**Andreas Holtkotte**

**May 2012**

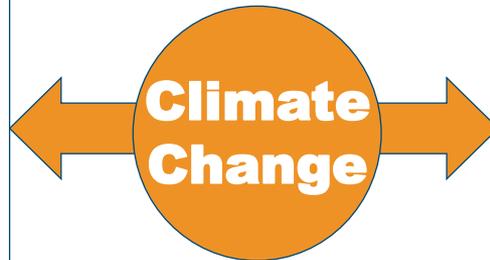
Die Zukunftsförderer



- Climate change as a great challenge for developing and industrialised countries
- Many impacts of climate change are visible already today → Climate variability
- Impacts of climate change include
  - Increase of temperature and evaporation,
  - Increase of extreme events like hurricanes, droughts and floods
  - Sea level rises and melting glaciers
  - Impacts on water availability and water quality

## Mitigation

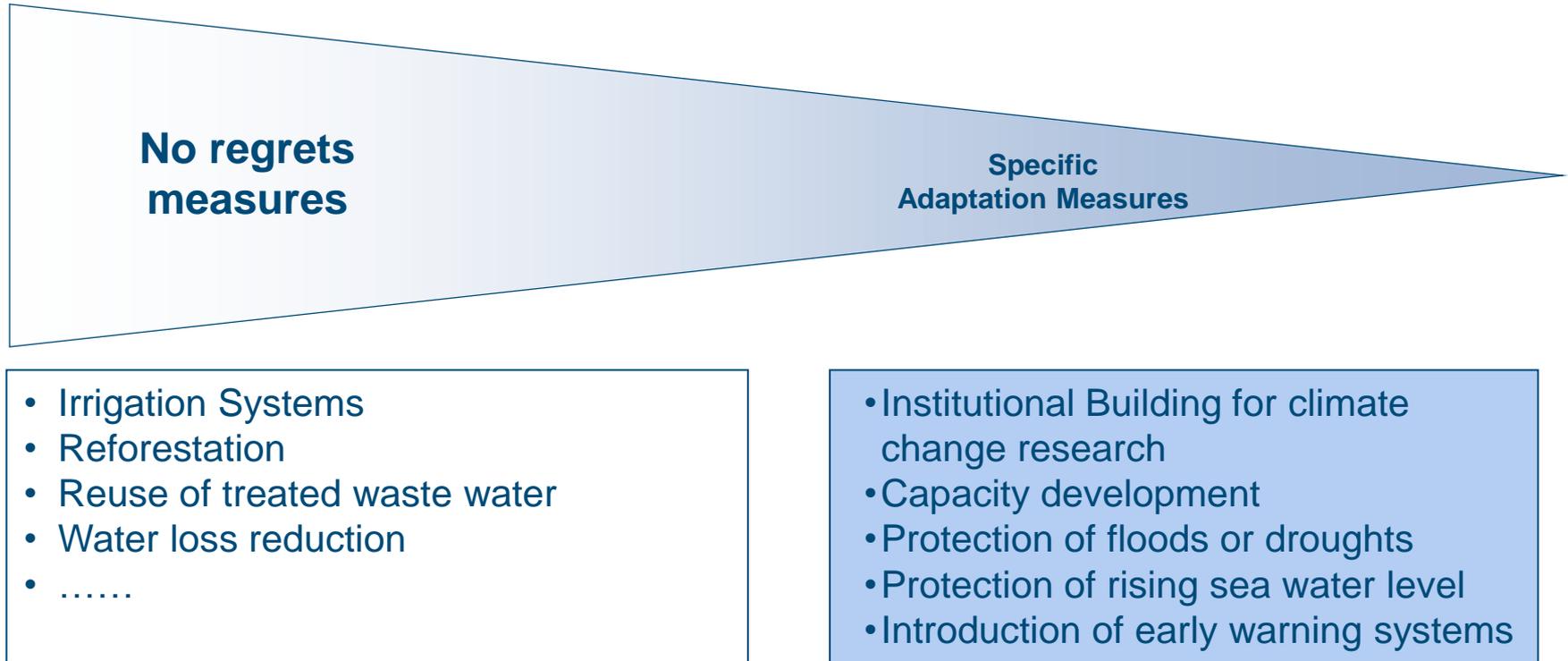
- Reduction of the emission of greenhouse gases like CO<sub>2</sub> and CH<sub>4</sub>
- Objective: Reduction of climate change



## Adaptation

- Reduction of the vulnerability of impacts of climate change
- Increase of adaptive capacity
- → Enables target systems to cope better with the impacts of climate change

# No regret or climate adaptation projects, how do we define them?



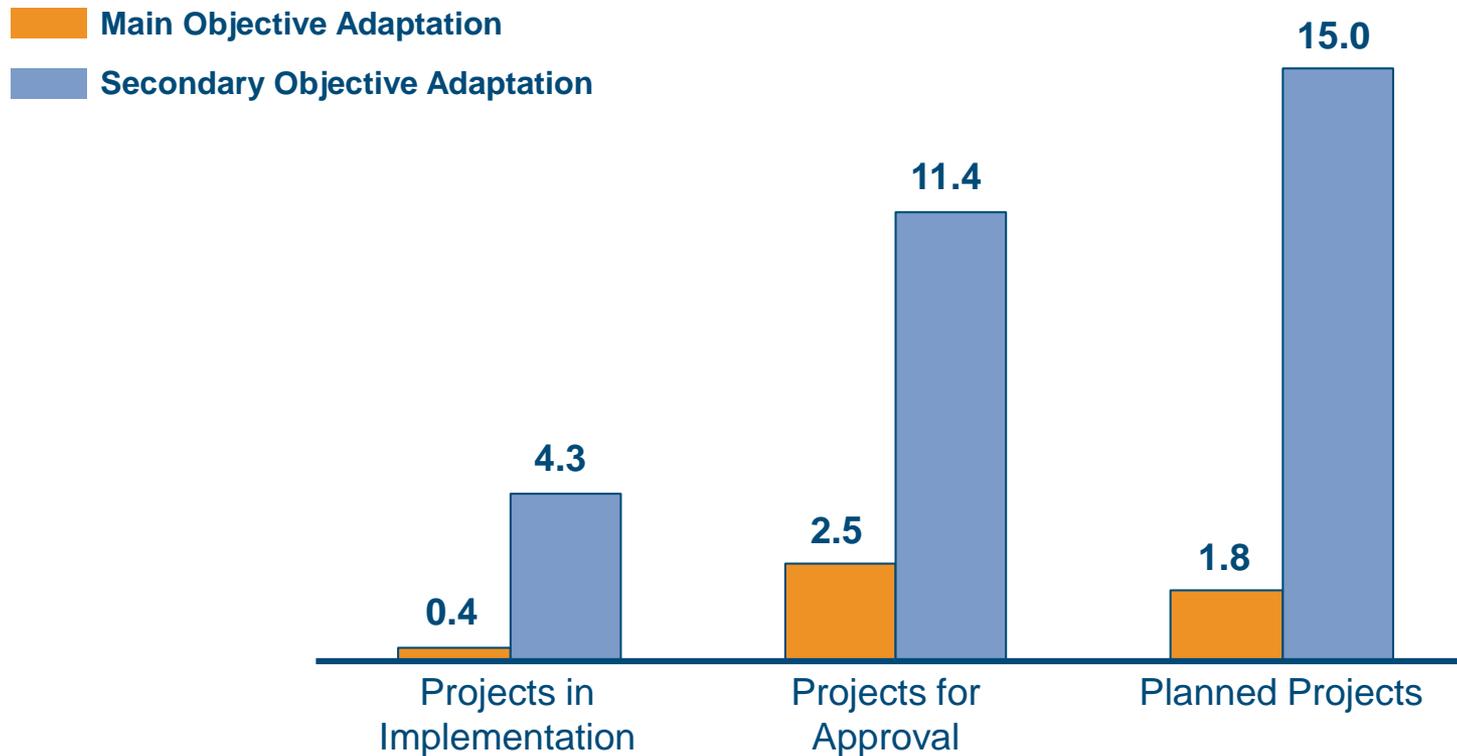
To do better, hydrological and meteorological data on regional and local level are of utmost importance: **Financial and technical support is needed!**

- February 2-3, 2012 at KfW premises
- More than 80 participants from over 20 countries
- Project market with different adaptation projects
- **Key messages:**
  - Climate adaptation is becoming more and more important for German Development Cooperation.
  - If mitigation is about energy, adaptation is about water.
  - Mainstreaming is the key to climate proof adaptation projects.
  - Cooperation with the scientific community is useful and necessary.



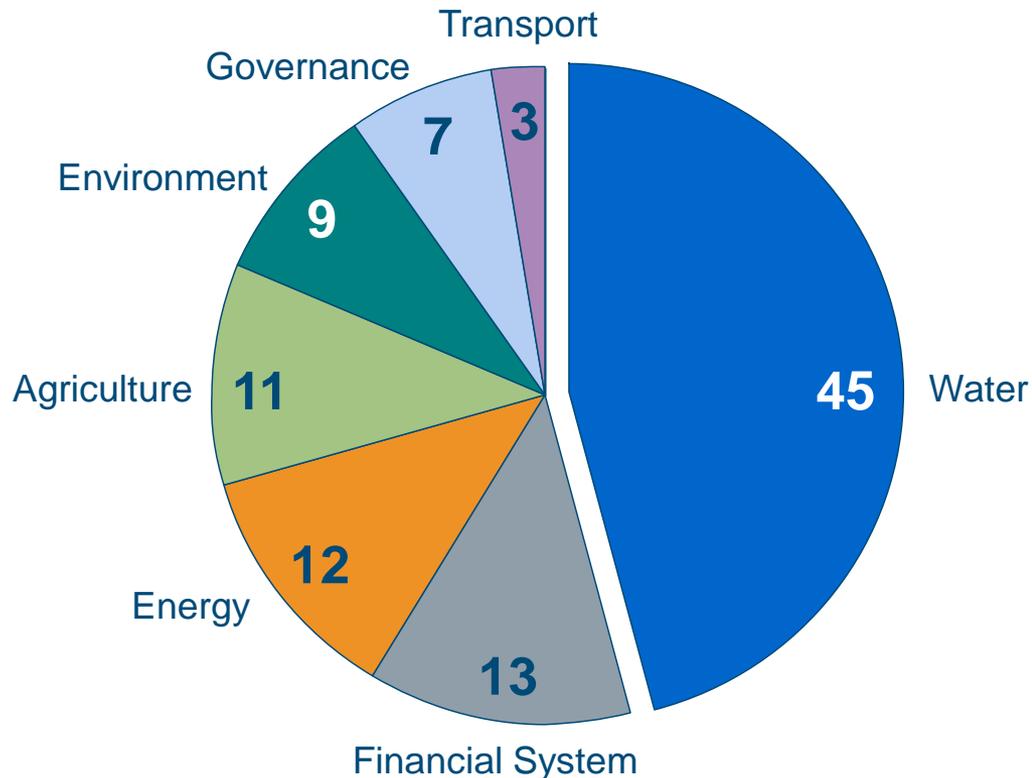
# Conclusion 1: Climate adaptation is becoming more and more important for German Development Cooperation

## Share of KfW Climate Adaptation Projects 2011 (in %)



## Conclusion 2: If mitigation is about energy, adaptation is about water

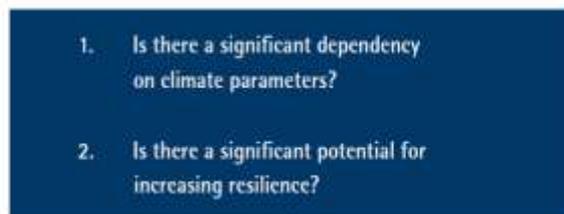
New commitments 2011 with main or secondary objective adaptation to climate change (in % per sector)



# Conclusion 3: Mainstreaming is the key to climate proof adaptation projects

- BMZ guideline: All projects are subject to an environmental and climate check (since January 1, 2011).
- KfW Manual: Sector specific climate assessment as standard procedure during appraisal.

## Step 1: Screening



- **Step 1:** Is planned project at significant risk of being substantially negative affected by climate change?

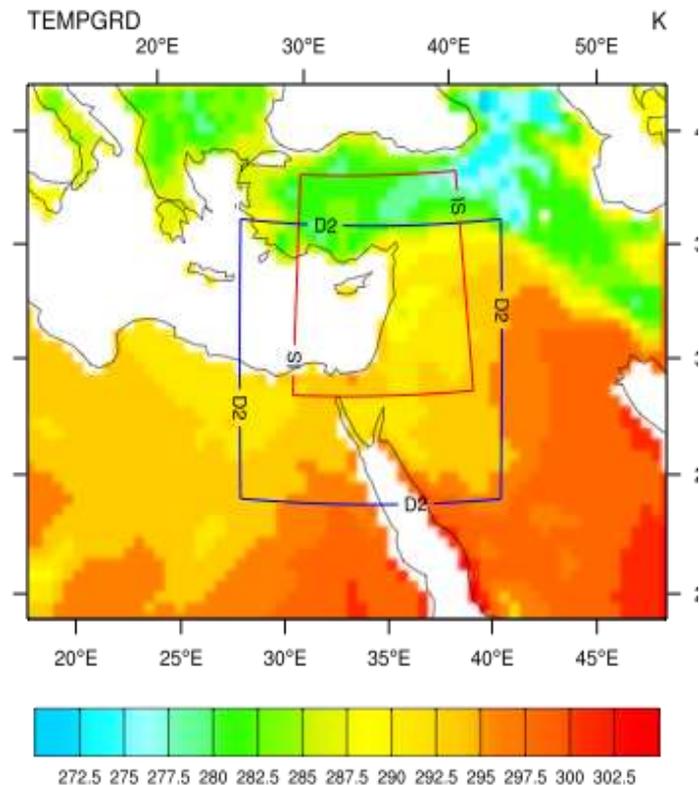
## Step 2: In-depth Assessment



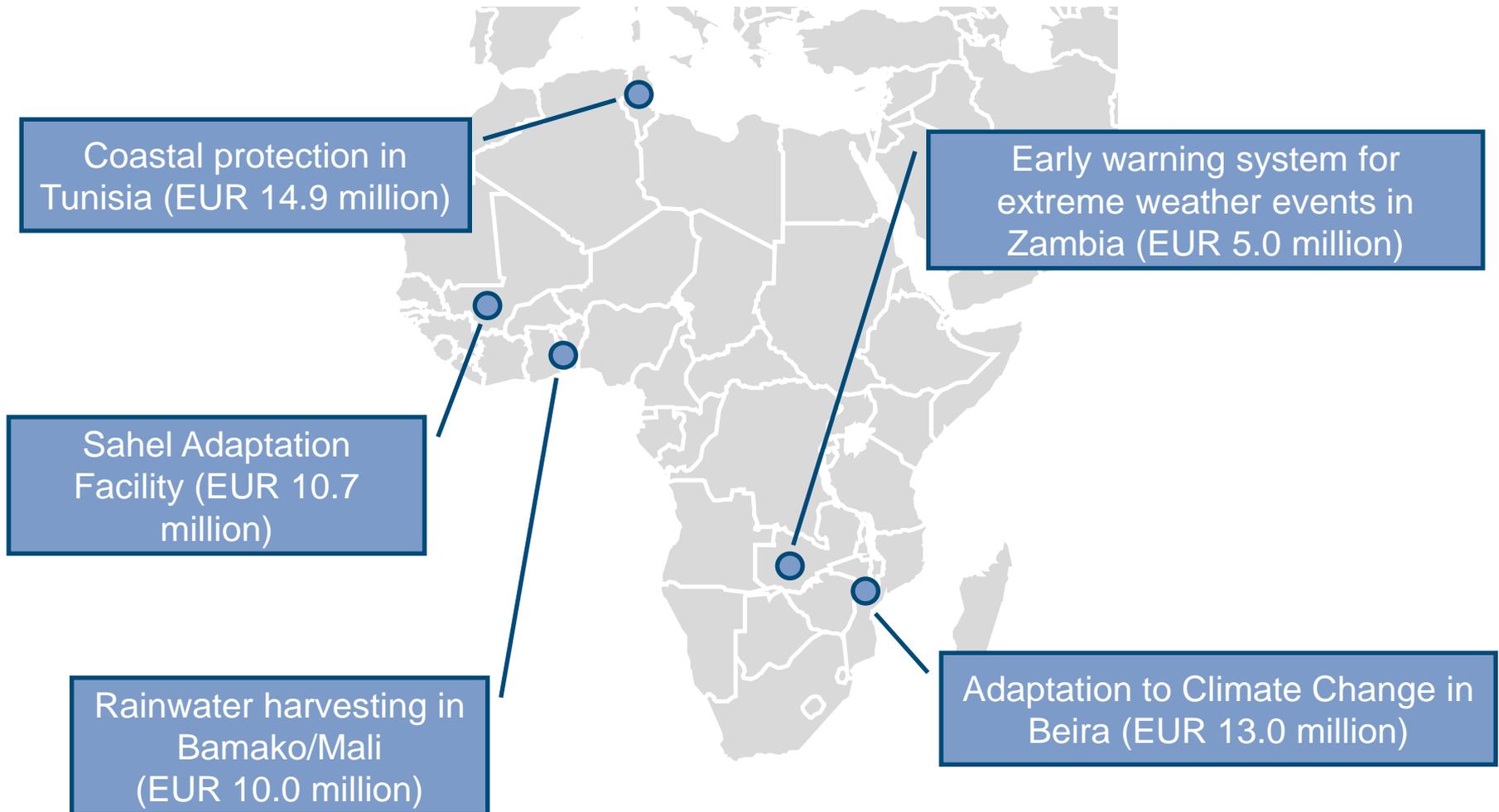
- **Step 2:** Compilation and analysis of past, current and projected climate development and its impacts on the project.
- **Outcome:** Identified adaptation activities are integrated into the project → Project is “climate proof”.

## Conclusion 4: Cooperation with the scientific community is useful and necessary

- KfW cooperates with the scientific community on adaptation methods and concepts in order to guarantee good quality project preparation and implementation:
  - Preparation of **Climate Fact Sheets** for selected countries together with the German Climate Service Center.
  - **Regional climate studies**, e.g. in the Nile Equatorial Lakes Region and for the Fiegh Spring close to Damascus.
  - **Adaptation related scientific network** will be established.



# Our adaptation portfolio in Africa: selected projects under preparation and / or implementation



## Problem

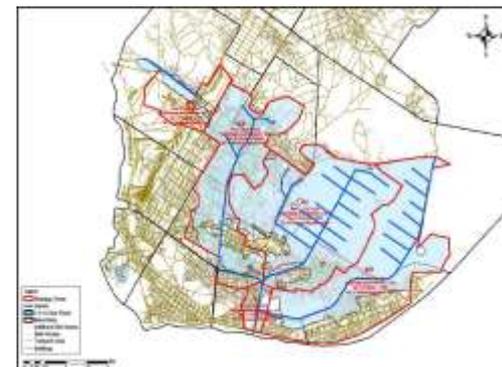
- Mozambique: One of the countries in Africa the most affected by the negative impacts of climate change
- Particular threat in Beira due to its location at the coast and low lying areas with an altitude around mean tidal water level

## Approach

- EUR 13 Mio. through MoF to the city of Beira (grant)
- Financing of the rehabilitation and/or extension of the existing storm water drainage system, based on existing urban strategies, and complementary capacity building measures

## Effects

- Resilience of Beira against flooding and the negative impacts of climate change improved
- Capacities of the city's administration in terms of operation and maintenance of the storm water drainage system strengthened



# Sahel: Cooperation with West African Development Bank (BOAD)

## Problem

- In the Sahel region of West Africa, climate change is **intensifying droughts and heavy rain** events
  - Resource degradation
  - Declining agricultural productivity
  - Destruction of infrastructure

## Approach

- **Grants to BOAD** (10,6 Mio. EURO) to allow **interest subsidies** for loans in the areas of:
  - Agriculture / Natural resources management
  - Drainage & Flood protection
- **Building up capacity** of BOAD in order to fund national climate adaptation projects
- **Science cooperation** & impact monitoring

## Effects

- Reduced vulnerability of the population through:
  - Adapted resource management
  - Improved food security and nutrition
  - Improvement and protection of infrastructure



# Zambia: Water and Climate Monitoring

## Problem

Predictions: Climate Change will lead to a stronger variability in precipitation and temperature.

- Intensified flood events
- Intensified drought periods

Impact on water balance → need of improved water resources management

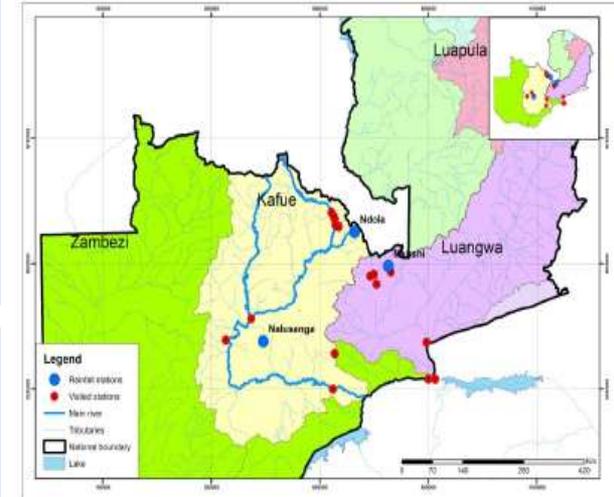
## Approach

The German Government (via BMZ) grants up to EUR 5 Mio. (FC) and EUR 3 Mio. (TC) for:

- Support to a sustainable establishment of WRM Authority as well as support to improved WRM
- Rehabilitation and construction of infrastructure for hydro-met data collection and transmission
- Development of an information system (hydro-met data)
- Development of a hydrological model for a river basin

## Impact

- Support to water sector reforms
- Established data base as resource for further national and regional programmes – climate change as cross-sectoral theme
- Improved integrated water resource management in Zambia



# Thank You for your attention

For further contact:

Andreas Holtkotte

Head of Division  
Water and Sanitation Division  
Sub-Saharan Africa

KfW Bankengruppe  
Palmengartenstrasse 5-9  
60325 Frankfurt am Main

Tel.: +49 (0)69 7431 2667  
Fax: +49 (0)69 7431 3748  
Mail: [andreas.holtkotte@kfw.de](mailto:andreas.holtkotte@kfw.de)  
[www.kfw.de](http://www.kfw.de)